



SEQUENCE LISTING

#9
RECEIVED
MAY 03 2002
TECH CENTER 1600/2900

<110> Prayaga, Sudhirdas K
Taupier Jr, Raymond J
Bandaru, Raj

<120> NOVEL POLYPEPTIDES HOMOLOGOUS TO THYMOSIN, EPHRIN A
RECEPTORS, AND FIBROMODULIN, AND POLYNUCLEOTIDES
ENCODING SAME

<130> 15966-585 CIP2

<140> 09/973,424
<141> 2001-10-09

<150> 60/159,805
<151> 1999-10-15

<150> 60/159,992
<151> 1999-10-18

<150> 60/160,952
<151> 1999-10-22

<150> 09/689,486
<151> 2000-10-12

<150> 09/687,276
<151> 2000-10-13

<160> 84

<170> PatentIn Ver. 2.1

<210> 1
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (61)..(234)

<400> 1
gccagcagga gtgccatggt gagaggcact ggcagggaat gctaggattg ttttaagaaa 60

atg gca gac aaa cca gac ata ggg gaa atc gcc agc ttc aat aag gcc 108
Met Ala Asp Lys Pro Asp Ile Gly Glu Ile Ala Ser Phe Asn Lys Ala
1 5 10 15

aag ctg aag aaa aca gag atg cag gag aac acc ctg ctg acc aaa gag 156
Lys Leu Lys Lys Thr Glu Met Gln Glu Asn Thr Leu Leu Thr Lys Glu
20 25 30

gcc att gag cag gag aag cgg gtg aaa ttt cct aag agc ctg gag gat 204
Ala Ile Glu Gln Glu Lys Arg Val Lys Phe Pro Lys Ser Leu Glu Asp
35 40 45

tcc cta ccc ctg tca tct tcg aga ccc cag tagtaatgtg gaggaagaat 254
 Ser Leu Pro Leu Ser Ser Ser Arg Pro Gln
 50 55

caccacaaga tggacacaag ccacaaactg tgacgtgaac ctgggcactc cgtgctgatg 314
 ccaccagcct gaggggtccct atgggtccaa tcagactgcc aaattctctg gtttgccttg 374
 ggatattata gaaaattatt tgcgtgaata atgaaaacac agctcatggc aaaaaa 430

<210> 2
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 2
 Met Ala Asp Lys Pro Asp Ile Gly Glu Ile Ala Ser Phe Asn Lys Ala
 1 5 10 15
 Lys Leu Lys Lys Thr Glu Met Gln Glu Asn Thr Leu Leu Thr Lys Glu
 20 25 30
 Ala Ile Glu Gln Glu Lys Arg Val Lys Phe Pro Lys Ser Leu Glu Asp
 35 40 45
 Ser Leu Pro Leu Ser Ser Ser Arg Pro Gln
 50 55

<210> 3
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 3
 Lys Leu Lys Lys Thr Glu Asn Thr Gln Glu Glu Lys Asn
 1 5 10

<210> 4
 <211> 3018
 <212> DNA
 <213> Homo sapiens

<400> 4
 atggcccccg cccggggcgc cctgccccct gcgctctggg tcgtcacggc cgcggcggcg 60
 gcggccacct gcgtgtccgc ggcgcgcggc gaagtgaatt tgctggacac gtcgaccatc 120
 cacggggact ggggctggct cacgtatccg gctcatgggt gggactccat caacgaggtg 180
 gacgagtcct tccagcccat ccacacgtac caggtttgca acgtcatgag cccaaccag 240
 aacaactggc tgcgcacgag ctgggtcccc cgagacggcg cccggcgcggt ctatgctgag 300
 atcaagttta ccctgcgcga ctgcaacagc atgcctggtg tgctgggcac ctgcaaggag 360
 accttcaacc tctactacct ggagtcggac cgcgacctgg gggccagcac acaagaaagc 420
 cagttcctca aaatcgacac cattgcgggc gacgagagct tcacaggtgc cgaccttggt 480
 gtgcggcgctc tcaagctcaa cacggaggtg cgcagtgtgg gtccccctcag caagcgcggc 540

```

ttctacctgg ccttccagga cataggtgcc tgccctggcca tcctctctct cgcgcatctac 600
tataagaagt gccctgccat ggtgcgcaat ctggctgcct tctcggaggc agtgacgggg 660
gccgactcgt cctcactggt ggaggtgagg ggccagtgcg tgcggcactc agaggagcgg 720
gacacacca agatgtactg cagcgcggag ggcgagtggc tcgtgcccac cggcaaattgc 780
gtgtgcagtg ccggctacga ggagcggcgg gatgcctgtg tggcctgtga getgggcttc 840
tacaagtcag cccctgggga ccagctgtgt gcccgtgcc ctccccacag ccactccgca 900
gctccagccg cccaagcctg ccactgtgac ctacgtact accgtgcagc cctggaccgg 960
ccgtcctcag cctgcacccg gccaccctcg gcaccagtga acctgatctc cagtgtgaat 1020
gggacatcag tgactctgga gtgggcccct cccctggacc caggtggccg cagtgcacac 1080
acctacaatg ccgtgtgccg ccgtgtcccc tgggactga gccgtgcga ggcatgtggg 1140
agcggcaccg gctttgtgcc ccagcagaca agcctggtgc aggccagcct gctggtggcc 1200
aacctgctgg cccacatgaa ctactccttc tggatcgagg ccgtcaatgg cgtgtccgac 1260
ctgagccccg agccccggcg ggccgtgtgt gtcaacatca ccacgaacca ggcagccccg 1320
tcccaggttg tggatccg tcaagagcgg gcggggcaga ccagcgtctc gctgtgtggg 1380
caggagcccc agcagccgaa cggcatcacc ctggagtatg agatcaagta ctacgagaag 1440
gacaaggaga tgcagagcta ctccaccctc aaggccgtca ccaccagagc caccgtctcc 1500
ggcctcaagc cgggcacccg ctacgtgttc caggtccgag cccgcacctc agcaggctgt 1560
ggcgccttca gccaggccat ggaggtggag accgggaaac cccggccccg ctatgacacc 1620
aggaccattg tctggatctg cctgacgtct atcacgggcc tgggtggtgt tctgtctctg 1680
ctcatctgca agaagaggca ctgtggctac agcaaggcct tccaggactc ggacgaggag 1740
aagatgcact atcagaatgg acaggcaccg ccacctgtct tcctgcctct gcatcacccc 1800
ccgggaaagc tcccagagcc ccagttctat gcggaacccc acacctacga ggagccaggc 1860
cgggcggggc gcagtttcac tcgggagatc gaggcctcta ggatccacat cgagaaaatc 1920
atcggtctg gagactccg ggaagtctgc tacgggaggc tgcgggtgcc agggcagcgg 1980
gatgtgcccg tggccatcaa ggcctcaaa gccggctaca cggagagaca gaggcgggag 2040
ttcctgagcg aggcgtccat catggggcaa ttcgaccatc ccaacatcat ccgcctcgag 2100
ggtgtcgtca cccgtggccg cctggcaatg attgtgactg agtacatgga gaacggctct 2160
ctggacacct tcctgaggac ccacgacggg cagttcacca tcatgcagct ggtgggcatg 2220
ctgagaggag tgggtgccgg catgcgtctc ctctcagacc tgggctatgt ccaccgagac 2280
ctggccgccc gcaacgtcct ggttgacagc aacctggtct gcaagggtgtc tgacttcggg 2340
ctctcacggg tgctggagga cgacccggat gctgctaca ccaccacggg cgggaagatc 2400
ccatccgct ggacggcccc agaggccatc gcctccgca ccttctctc ggccagcgac 2460
gtgtggagct tcggcgtggt catgtgggag gtgtggcct atggggagcg gccctactgg 2520
aacatgacca accgggatgt gatcagctct gtggaggagg ggtaccgct gcccgaccc 2580
atgggctgcc cccacgcct gcaccagctc atgctcgact gttggcacia ggaccgggag 2640
cagcggcctc gcttctccca gattgtcagt gtctcgatg cgctcatccg cagccctgag 2700
agtctcagg ccaccgccac agtcagcagg tgcccacccc ctgccttcgt ccggagctgc 2760
tttgacctcc gagggggcag cgggtggcgg gggggcctca ccgtggggga ctggctggac 2820
tccatccgca tgggcccggta ccgagaccac ttcgtgcgg gcggatactc ctctctgggc 2880
atggtgttac gcatgaacgc ccaggacgtg cgcgcctgg gcatcacct catgggccac 2940
cagaagaaga tcctgggcag cattcagacc atgcggggcc agctgaccag caccagggg 3000
ccccgcggc acctctga
3018

```

```

<210> 5
<211> 992
<212> PRT
<213> Homo sapiens

```

```

<400> 5
Met Ala Pro Ala Arg Gly Arg Leu Pro Pro Ala Leu Trp Val Val Thr
  1             5             10             15

Ala Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Ala Arg Gly Glu Val
  20             25             30

Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr

```

35	40	45
Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe		
50	55	60
Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln		
65	70	75
Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg Asp Gly Ala Arg Arg		
85	90	95
Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Met Pro		
100	105	110
Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Leu Glu		
115	120	125
Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys		
130	135	140
Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly		
145	150	155
Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Ser Val Gly Pro Leu		
165	170	175
Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu		
180	185	190
Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val		
195	200	205
Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser		
210	215	220
Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg		
225	230	235
Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro		
245	250	255
Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala		
260	265	270
Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln		
275	280	285
Leu Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Ala Pro Ala Ala		
290	295	300
Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro		
305	310	315
Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile		
325	330	335
Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu		

340										345					350						
Asp	Pro	Gly	Gly	Arg	Ser	Asp	Ile	Thr	Tyr	Asn	Ala	Val	Cys	Arg	Arg						
		355					360					365									
Cys	Pro	Trp	Ala	Leu	Ser	Arg	Cys	Glu	Ala	Cys	Gly	Ser	Gly	Thr	Arg						
	370					375					380										
Phe	Val	Pro	Gln	Gln	Thr	Ser	Leu	Val	Gln	Ala	Ser	Leu	Leu	Val	Ala						
385					390					395					400						
Asn	Leu	Leu	Ala	His	Met	Asn	Tyr	Ser	Phe	Trp	Ile	Glu	Ala	Val	Asn						
				405					410					415							
Gly	Val	Ser	Asp	Leu	Ser	Pro	Glu	Pro	Arg	Arg	Ala	Ala	Val	Val	Asn						
			420					425					430								
Ile	Thr	Thr	Asn	Gln	Ala	Ala	Pro	Ser	Gln	Val	Val	Val	Ile	Arg	Gln						
		435					440					445									
Glu	Arg	Ala	Gly	Gln	Thr	Ser	Val	Ser	Leu	Leu	Trp	Gln	Glu	Pro	Glu						
	450					455					460										
Gln	Pro	Asn	Gly	Ile	Ile	Leu	Glu	Tyr	Glu	Ile	Lys	Tyr	Tyr	Glu	Lys						
465					470					475					480						
Asp	Lys	Glu	Met	Gln	Ser	Tyr	Ser	Thr	Leu	Lys	Ala	Val	Thr	Thr	Arg						
				485					490					495							
Ala	Thr	Val	Ser	Gly	Leu	Lys	Pro	Gly	Thr	Arg	Tyr	Val	Phe	Gln	Val						
			500					505					510								
Arg	Ala	Arg	Thr	Ser	Ala	Gly	Cys	Gly	Arg	Phe	Ser	Gln	Ala	Met	Glu						
		515					520					525									
Val	Glu	Thr	Gly	Lys	Pro	Arg	Pro	Arg	Tyr	Asp	Thr	Arg	Thr	Ile	Val						
	530					535					540										
Trp	Ile	Cys	Leu	Thr	Leu	Ile	Thr	Gly	Leu	Val	Val	Leu	Leu	Leu	Leu						
545					550					555					560						
Leu	Ile	Cys	Lys	Lys	Arg	His	Cys	Gly	Tyr	Ser	Lys	Ala	Phe	Gln	Asp						
				565					570					575							
Ser	Asp	Glu	Glu	Lys	Met	His	Tyr	Gln	Asn	Gly	Gln	Ala	Pro	Pro	Pro						
		580						585					590								
Val	Phe	Leu	Pro	Leu	His	His	Pro	Pro	Gly	Lys	Leu	Pro	Glu	Pro	Gln						
		595					600					605									
Phe	Tyr	Ala	Glu	Pro	His	Thr	Tyr	Glu	Glu	Pro	Gly	Arg	Ala	Gly	Arg						
	610					615					620										
Ser	Phe	Thr	Arg	Glu	Ile	Glu	Ala	Ser	Arg	Ile	His	Ile	Glu	Lys	Ile						
625					630					635					640						
Ile	Gly	Ser	Gly	Asp	Ser	Gly	Glu	Val	Cys	Tyr	Gly	Arg	Leu	Arg	Val						

645					650					655					
Pro	Gly	Gln	Arg	Asp	Val	Pro	Val	Ala	Ile	Lys	Ala	Leu	Lys	Ala	Gly
			660					665					670		
Tyr	Thr	Glu	Arg	Gln	Arg	Arg	Asp	Phe	Leu	Ser	Glu	Ala	Ser	Ile	Met
		675					680					685			
Gly	Gln	Phe	Asp	His	Pro	Asn	Ile	Ile	Arg	Leu	Glu	Gly	Val	Val	Thr
	690						695				700				
Arg	Gly	Arg	Leu	Ala	Met	Ile	Val	Thr	Glu	Tyr	Met	Glu	Asn	Gly	Ser
705					710					715					720
Leu	Asp	Thr	Phe	Leu	Arg	Thr	His	Asp	Gly	Gln	Phe	Thr	Ile	Met	Gln
				725					730					735	
Leu	Val	Gly	Met	Leu	Arg	Gly	Val	Gly	Ala	Gly	Met	Arg	Tyr	Leu	Ser
			740					745					750		
Asp	Leu	Gly	Tyr	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Val	Leu	Val
		755						760				765			
Asp	Ser	Asn	Leu	Val	Cys	Lys	Val	Ser	Asp	Phe	Gly	Leu	Ser	Arg	Val
		770						775			780				
Leu	Glu	Asp	Asp	Pro	Asp	Ala	Ala	Tyr	Thr	Thr	Thr	Gly	Gly	Lys	Ile
785					790					795					800
Pro	Ile	Arg	Trp	Thr	Ala	Pro	Glu	Ala	Ile	Ala	Phe	Arg	Thr	Phe	Ser
				805					810					815	
Ser	Ala	Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Val	Met	Trp	Glu	Val	Leu
			820					825					830		
Ala	Tyr	Gly	Glu	Arg	Pro	Tyr	Trp	Asn	Met	Thr	Asn	Arg	Asp	Val	Ile
		835						840				845			
Ser	Ser	Val	Glu	Glu	Gly	Tyr	Arg	Leu	Pro	Ala	Pro	Met	Gly	Cys	Pro
		850					855				860				
His	Ala	Leu	His	Gln	Leu	Met	Leu	Asp	Cys	Trp	His	Lys	Asp	Arg	Ala
865					870					875					880
Gln	Arg	Pro	Arg	Phe	Ser	Gln	Ile	Val	Ser	Val	Leu	Asp	Ala	Leu	Ile
				885					890					895	
Arg	Ser	Pro	Glu	Ser	Leu	Arg	Ala	Thr	Ala	Thr	Val	Ser	Arg	Cys	Pro
			900					905					910		
Pro	Pro	Ala	Phe	Val	Arg	Ser	Cys	Phe	Asp	Leu	Arg	Gly	Gly	Ser	Gly
		915					920					925			
Gly	Gly	Gly	Gly	Leu	Thr	Val	Gly	Asp	Trp	Leu	Asp	Ser	Ile	Arg	Met
	930						935				940				
Gly	Arg	Tyr	Arg	Asp	His	Phe	Ala	Ala	Gly	Gly	Tyr	Ser	Ser	Leu	Gly

945		950		955		960
Met Val Leu Arg	Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr					
	965		970			975
Leu Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg						
	980		985			990

<210> 6
 <211> 2025
 <212> DNA
 <213> Homo sapiens

<400> 6

atggtggtgg	cacacccccac	cgccactgcc	accaccacgc	ccactgccac	tgtcacggcc	60
accgttgtga	tgaccacggc	caccatggac	ctgcgggact	ggctgttcct	ctgctacggg	120
ctcatcgct	tcctgacgga	ggtcatcgac	agcaccacct	gcccctcggt	gtgccgctgc	180
gacaacggct	tcattctactg	caacgaccgg	ggactcacat	ccatccccgc	agatatccct	240
gatgatgcca	ccaccctcta	cctgcagaac	aaccagatca	acaacgcg	catccccag	300
gacctcaaga	ccaaggtcaa	cgtgcaggtc	atctacctat	acgagaatga	cctggatgag	360
ttccccatca	acctgccccg	ctccctccgg	gagctgcacc	tgcaggacaa	caatgtgcgc	420
accattgcca	gggactcgct	ggcccgcatc	ccgctgctgg	agaagctgca	cctggatgac	480
aactccgtgt	ccaccgtcag	cattgaggag	gacgccttcg	ccgacagcaa	acagctcaag	540
ctgctcttcc	tgagccggaa	ccacctgagc	agcatcccct	cggggctgcc	gcacacgctg	600
gaggagctgc	ggctggatga	caaccgcata	tccaccatcc	cgtgcatagc	cttcaagggc	660
ctcaacagcc	tgcggcgccct	ggtgctggac	ggtaacctgc	tggccaacca	gcgcacgcc	720
gacgacacct	tcagccgcct	acagaacctc	acagagctct	cgtggtgctg	caattcgctg	780
gccgcgccac	ccctcaacct	gcccagcgcc	cacctgcaga	agctctacct	gcaggacaat	840
gccatcagcc	acatcccccta	caacacgctg	gccaaagtgc	gtgagctgga	gcggctggac	900
ctgtccaaca	acaacctgac	cacgctgccc	cgcggcctgt	tcgacgacct	ggggaacctg	960
gcccagctgc	tgctcaggaa	caaccttggt	ttttgtggct	gcaacctcat	gtggctgcgg	1020
gactgggtga	aggcacgggc	ggccgtgggtc	aacgtgcggg	gcctcatgtg	ccagggccct	1080
gagaagggtcc	ggggcatggc	catcaaggac	attaccagcg	agatggacga	gtgttttgag	1140
acggggccgc	agggcgcgct	ggccaatgctg	gctgccaaga	ccacggccag	caaccacgcc	1200
tctgccacca	cgccccaggg	ttccctgttt	acctcaagg	ccaaaaggcc	agggtcgcgc	1260
ctccccgact	ccaacattga	ctacccccatg	gccacgggtg	atggcgccaa	gacctggcc	1320
atccacgtga	aggccctgac	ggcagactcc	atccgcatca	cgtggaaggc	cacgctcccc	1380
gcctcctctt	tccggctcag	ttggctgcgc	ctgggccaca	gcccagccgt	gggtccatc	1440
acggagacct	tggtgcaggg	ggacaagaca	gagtacctgc	tgacagccct	ggagcccaag	1500
tccacctaca	tcattctgcat	ggtcaccatg	gagaccagca	atgcctacgt	agctgatgag	1560
acacccgtgt	gtgccaaggc	agagacagcc	gacagctatg	gccctaccac	cacactcaac	1620
caggagcaga	acgctggccc	catggcgagc	ctgcccctgg	cgggcatcat	cggcggggca	1680
gtggctcttg	tcttctctt	cctggctctg	ggggccatct	gctggtacgt	gcaccaggct	1740
ggcgagctgc	tgaccgggga	gagggcctac	aaccggggca	gcaggaaaaa	ggatgactat	1800
atggagtcag	ggaccaagaa	ggataactcc	atcctggaaa	tccgcggccc	tgggtgcag	1860
atgctgcccc	tcaaccgcta	ccgcgccaaa	gaggagtacg	tggtccacac	tatcttcccc	1920
tccaacggca	gcagctctg	caaggccaca	cacaccattg	gctacggcac	cacgcggggc	1980
taccgggacg	gcggcatccc	cgacatagac	tactcctaca	catga		2025

<210> 7
 <211> 674
 <212> PRT

<213> Homo sapiens

<400> 7

```
Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
 1              5              10              15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
      20              25              30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
      35              40              45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
      50              55              60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
      65              70              75              80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
      85              90              95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
      100             105             110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
      115             120             125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
      130             135             140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
      145             150             155             160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
      165             170             175

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
      180             185             190

Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
      195             200             205

Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
      210             215             220

Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
      225             230             235             240

Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
      245             250             255

Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu
      260             265             270

Gln Lys Leu Tyr Leu Gln Asp Asn Ala Ile Ser His Ile Pro Tyr Asn
      275             280             285
```


Thr Leu Ala Lys Met Arg Glu Leu Glu Arg Leu Asp Leu Ser Asn Asn
 290 295 300
 Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe Asp Asp Leu Gly Asn Leu
 305 310 315 320
 Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp Phe Cys Gly Cys Asn Leu
 325 330 335
 Met Trp Leu Arg Asp Trp Val Lys Ala Arg Ala Ala Val Val Asn Val
 340 345 350
 Arg Gly Leu Met Cys Gln Gly Pro Glu Lys Val Arg Gly Met Ala Ile
 355 360 365
 Lys Asp Ile Thr Ser Glu Met Asp Glu Cys Phe Glu Thr Gly Pro Gln
 370 375 380
 Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
 385 390 395 400
 Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
 405 410 415
 Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
 420 425 430
 Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
 435 440 445
 Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
 450 455 460
 Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
 465 470 475 480
 Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
 485 490 495
 Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
 500 505 510
 Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
 515 520 525
 Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
 530 535 540
 Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
 545 550 555 560
 Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
 565 570 575
 Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
 580 585 590

Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
 595 600 605
 Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
 610 615 620
 Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
 625 630 635 640
 Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
 645 650 655
 Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
 660 665 670
 Tyr Thr

<210> 8
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag190 Forward
 PCR Primer Sequence

<400> 8
 tggaggaaga atcaccacaa ga 22

<210> 9
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag190 Probe
 PCR Primer Sequence

<400> 9
 caagccacaa actgtgacgt gaacctg 27

<210> 10
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag190 Reverse
 PCR Primer Sequence

<400> 10
 gtggcatcag cacggagtg 19

<210> 11
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag087 Forward
 PCR Primer Sequence

 <400> 11
 cgcgagtttca ctcgggagat 20

 <210> 12
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag087 Probe
 PCR Primer Sequence

 <400> 12
 cctctaggat ccacatcgag aaaatcatcg g 31

 <210> 13
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag087 Reverse
 PCR Primer Sequence

 <400> 13
 agcagacttc cccggagtct 20

 <210> 14
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2 Forward
 PCR Primer Sequence

 <400> 14
 ggatccgcgc gcggcgaagt gaatttgctg g 31

 <210> 15
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 Reverse
 PCR Primer Sequence

<400> 15
 ctcgagggtc ctggtgtcat agcggggcc 29

<210> 16
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S1 PCR
 Primer Sequence

<400> 16
 tacctggagt cggaccgc 18

<210> 17
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S2 PCR
 Primer Sequence

<400> 17
 gcggtccgac tccaggta 18

<210> 18
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S3 PCR
 Primer Sequence

<400> 18
 cagtgcgtgc ggcactcag 19

<210> 19
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2 S4 PCR
 Primer Sequence

<400> 19
tgagtgccgc acgcactgg 19

<210> 20
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S5 PCR
Primer Sequence

<400> 20
ctggacccag gtggccgc 18

<210> 21
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S6 PCR
Primer Sequence

<400> 21
gcggccacct ggggccag 18

<210> 22
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S7 PCR
Primer Sequence

<400> 22
cccgagcagc cgaacggc 18

<210> 23
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV2 S8 PCR
Primer Sequence

<400> 23
gccgttcggc tgctcggg 18

<210> 24

<211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 Forward
 PCR Primer Sequence

 <400> 24
 ggatccacca cctgcccctc ggtgtgc 27

 <210> 25
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 Reverse
 PCR Primer Sequence

 <400> 25
 ctcgaggcca gcgttctgct cctggttgag tgtgg 35

 <210> 26
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 S1 PCR
 Primer Sequence

 <400> 26
 cgcaccattg ccagggac 18

 <210> 27
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV3 S2 PCR
 Primer Sequence

 <400> 27
 gtccctggca atggtgcg 18

 <210> 28
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> Description of Artificial Sequence: NOV3 S3 PCR
Primer Sequence

<400> 28
ctggtgcgca attcgctggc c 21

<210> 29
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S4 PCR
Primer Sequence

<400> 29
ggccagcgaa ttgcgcacca g 21

<210> 30
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S5 PCR
Primer Sequence

<400> 30
cacgcctctg ccaccacg 18

<210> 31
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV3 S6 PCR
Primer Sequence

<400> 31
cgtggtggca gaggcgtg 18

<210> 32
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pSec-V5 His
Forward Oligonucleotide Primer Sequence

<400> 32
ctcgtcctcg agggtgaagcc tatccctaac 30

<210> 33
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: pSec-V5 His
 Reverse Oligonucleotide Primer Sequence

<400> 33
 ctcgtcgggc ccctgatcag cgggtttaaa c 31

<210> 34
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 34
 Met Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala
 1 5 10 15
 Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys
 20 25 30
 Glu Thr Ile Glu Gln Glu Lys Arg
 35 40

<210> 35
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 35
 Lys Leu Lys Lys Thr Glu Thr Gln Glu Asn
 1 5 10

<210> 36
 <211> 38
 <212> PRT
 <213> Homo sapiens

<400> 36
 Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys
 35

<210> 37
 <211> 40
 <212> PRT
 <213> Bos taurus

<400> 37
 Ala Asp Lys Pro Asp Leu Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 38
 <211> 40
 <212> PRT
 <213> Sus scrofa

<400> 38
 Ala Asp Lys Pro Asp Met Gly Glu Ile Asn Ser Phe Asp Lys Ala Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 39
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 39
 Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15
 Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30
 Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 40
 <211> 41
 <212> PRT
 <213> Mus musculus

<400> 40
 Met Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser
 1 5 10 15

Lys Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys
 20 25 30

Glu Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 41
 <211> 40
 <212> PRT
 <213> *Oryctolagus cuniculus*

<400> 41
 Ala Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
 35 40

<210> 42
 <211> 39
 <212> PRT
 <213> *Xenopus laevis*

<400> 42
 Ser Asp Lys Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ala Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Lys Gln
 35

<210> 43
 <211> 40
 <212> PRT
 <213> *Homo sapiens*

<400> 43
 Ser Asp Lys Pro Gly Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys
 1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Ser Ser Lys Glu
 20 25 30

Thr Ile Glu Gln Glu Arg Gln Ala
 35 40

<210> 44
 <211> 40

<212> PRT

<213> *Oncorhynchus mykiss*

<400> 44

Ser Asp Lys Pro Asn Leu Glu Glu Val Ala Ser Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 45

<211> 40

<212> PRT

<213> *Oncorhynchus mykiss*

<400> 45

Ser Asp Lys Pro Asp Leu Ala Glu Val Ser Asn Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Thr Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Gln Ala
35 40

<210> 46

<211> 40

<212> PRT

<213> *Lateolabrax japonicus*

<400> 46

Ser Asp Lys Pro Asp Ile Ser Glu Val Thr Ser Phe Asp Lys Thr Lys
1 5 10 15

Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu
20 25 30

Thr Ile Glu Gln Glu Lys Ala Ala
35 40

<210> 47

<211> 39

<212> PRT

<213> *Rattus norvegicus*

<400> 47

Met Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Thr Phe Asp Lys Ser
1 5 10 15

Lys Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys
20 25 30

Glu Thr Ile Gln Gln Glu Lys
35

<210> 48
<211> 38
<212> PRT
<213> Homo sapiens

<400> 48
Ser Asp Lys Pro Asp Leu Ser Glu Val Glu Lys Phe Asp Arg Ser Lys
1 5 10 15
Leu Lys Lys Thr Asn Thr Glu Glu Lys Asn Thr Leu Pro Ser Lys Glu
20 25 30
Thr Ile Gln Gln Glu Lys
35

<210> 49
<211> 35
<212> PRT
<213> Drosophila melanogaster

<400> 49
Ile Ala Gly Ile Glu Asn Phe Asp Ala Lys Lys Leu Lys His Thr Glu
1 5 10 15
Thr Asn Glu Lys Asn Val Leu Pro Thr Lys Glu Val Ile Glu Ala Glu
20 25 30
Lys Gln Ala
35

<210> 50
<211> 31
<212> PRT
<213> Drosophila melanogaster

<400> 50
Gly Ile Thr Ala Phe Asn Gln Asn Asn Leu Lys His Thr Glu Thr Asn
1 5 10 15
Glu Lys Asn Pro Leu Pro Asp Lys Glu Ala Ile Glu Gln Glu Lys
20 25 30

<210> 51
<211> 38
<212> PRT
<213> Homo sapiens

<400> 51
Ala Asp Lys Pro Asp Met Gly Glu Ile Ala Ser Phe Asp Lys Ala Lys

1	5	10	15
Leu Lys Lys Thr Glu Thr Gln Glu Lys Asn Thr Leu Pro Thr Lys Glu	20	25	30
Thr Ile Glu Gln Glu Lys	35		
<210> 52			
<211> 991			
<212> PRT			
<213> Mus musculus			
<400> 52			
Met Ala Pro Ala Arg Ala Arg Leu Ser Pro Ala Leu Trp Val Val Thr	5	10	15
1			
Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Gly Arg Gly Glu Val Asn	20	25	30
Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr Tyr	35	40	45
Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe Arg	50	55	60
Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln Asn	65	70	75
Asn Trp Leu Arg Thr Asn Trp Val Pro Arg Asp Gly Ala Arg Arg Val	85	90	95
Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Gly	100	105	110
Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu His Tyr Leu Glu Ser	115	120	125
Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys Ile	130	135	140
Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly Val	145	150	155
Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Gly Val Gly Pro Leu Ser	165	170	175
Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu Ala	180	185	190
Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val Arg	195	200	205
Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser Ser	210	215	220

Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg Asp
 225 230 235 240
 Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro Ile
 245 250 255
 Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala Cys
 260 265 270
 Met Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln Leu
 275 280 285
 Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln
 290 295 300
 Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro
 305 310 315 320
 Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser
 325 330 335
 Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp
 340 345 350
 Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys
 355 360 365
 Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe
 370 375 380
 Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn
 385 390 395 400
 Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly
 405 410 415
 Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile
 420 425 430
 Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu
 435 440 445
 Arg Ala Gly Gln Thr Ser Val Ser Leu Leu Trp Gln Glu Pro Glu Gln
 450 455 460
 Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile Lys Tyr Tyr Glu Lys Asp
 465 470 475 480
 Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys Ala Val Thr Thr Arg Ala
 485 490 495
 Thr Val Ser Gly Leu Lys Pro Gly Thr Arg Tyr Val Phe Gln Val Arg
 500 505 510
 Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe Ser Gln Ala Met Glu Val
 515 520 525

Glu	Thr	Gly	Lys	Pro	Arg	Pro	Arg	Tyr	Asp	Thr	Arg	Thr	Ile	Val	Trp	530	535	540
Ile	Cys	Leu	Thr	Leu	Ile	Thr	Gly	Leu	Val	Val	Leu	Leu	Leu	Leu	Leu	545	550	555
Ile	Cys	Lys	Lys	Arg	His	Cys	Gly	Tyr	Ser	Lys	Ala	Phe	Gln	Asp	Ser	565	570	575
Asp	Glu	Glu	Lys	Met	His	Tyr	Gln	Asn	Gly	Gln	Ala	Pro	Pro	Pro	Val	580	585	590
Phe	Leu	Pro	Leu	Asn	His	Pro	Pro	Gly	Lys	Phe	Pro	Glu	Thr	Gln	Phe	595	600	605
Ser	Ala	Glu	Pro	His	Thr	Tyr	Glu	Glu	Pro	Gly	Arg	Ala	Gly	Arg	Ser	610	615	620
Phe	Thr	Arg	Glu	Ile	Glu	Ala	Ser	Arg	Ile	His	Ile	Glu	Lys	Ile	Ile	625	630	635
Gly	Ser	Gly	Glu	Ser	Gly	Glu	Val	Cys	Tyr	Gly	Arg	Leu	Gln	Val	Pro	645	650	655
Gly	Gln	Arg	Asp	Val	Pro	Val	Ala	Ile	Lys	Ala	Leu	Lys	Ala	Gly	Tyr	660	665	670
Thr	Glu	Arg	Gln	Arg	Gln	Asp	Phe	Leu	Ser	Glu	Ala	Ala	Ile	Met	Gly	675	680	685
Gln	Phe	Asp	His	Pro	Asn	Ile	Ile	Arg	Leu	Glu	Gly	Val	Val	Thr	Arg	690	695	700
Gly	Arg	Leu	Ala	Met	Ile	Val	Thr	Glu	Tyr	Met	Glu	Asn	Gly	Ser	Leu	705	710	715
Asp	Ala	Phe	Leu	Arg	Thr	His	Asp	Gly	Gln	Phe	Thr	Ile	Val	Gln	Leu	725	730	735
Val	Gly	Met	Leu	Arg	Gly	Val	Gly	Ala	Gly	Met	Arg	Tyr	Leu	Ser	Asp	740	745	750
Leu	Gly	Tyr	Ile	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Val	Leu	Val	Asp	755	760	765
Gly	Arg	Leu	Val	Cys	Lys	Val	Ser	Asp	Phe	Gly	Leu	Ser	Arg	Ala	Leu	770	775	780
Glu	Asp	Asp	Pro	Glu	Ala	Ala	Tyr	Thr	Thr	Ala	Gly	Gly	Lys	Ile	Pro	785	790	795
Ile	Arg	Trp	Thr	Ala	Pro	Glu	Ala	Ile	Ala	Phe	Arg	Thr	Phe	Ser	Ser	805	810	815
Ala	Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Val	Met	Trp	Glu	Val	Leu	Ala	820	825	830

Tyr Gly Glu Arg Pro Tyr Trp Asn Met Thr Asn Gln Asp Val Ile Ser
 835 840 845
 Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro Arg
 850 855 860
 Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala Gln
 865 870 875 880
 Arg Pro Arg Phe Ala His Val Val Ser Val Leu Asp Ala Leu Val His
 885 890 895
 Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro Pro
 900 905 910
 Pro Ala Phe Ala Arg Ser Cys Phe Asp Leu Arg Ala Gly Gly Ser Gly
 915 920 925
 Asn Gly Asp Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met Gly
 930 935 940
 Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly Met
 945 950 955 960
 Val Leu Arg Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr Leu
 965 970 975
 Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg
 980 985 990

<210> 53
 <211> 992
 <212> PRT
 <213> Homo sapiens

<400> 53
 Met Ala Pro Ala Arg Gly Arg Leu Pro Pro Ala Leu Trp Val Val Thr
 1 5 10 15
 Ala Ala Ala Ala Ala Thr Cys Val Ser Ala Ala Arg Gly Glu Val
 20 25 30
 Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp Trp Gly Trp Leu Thr
 35 40 45
 Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu Val Asp Glu Ser Phe
 50 55 60
 Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val Met Ser Pro Asn Gln
 65 70 75 80
 Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg Asp Gly Ala Arg Arg
 85 90 95
 Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Met Pro
 100 105 110

Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Leu Glu
 115 120 125
 Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu Ser Gln Phe Leu Lys
 130 135 140
 Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gly Ala Asp Leu Gly
 145 150 155 160
 Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg Ser Val Gly Pro Leu
 165 170 175
 Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp Ile Gly Ala Cys Leu
 180 185 190
 Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys Cys Pro Ala Met Val
 195 200 205
 Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr Gly Ala Asp Ser Ser
 210 215 220
 Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg His Ser Glu Glu Arg
 225 230 235 240
 Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly Glu Trp Leu Val Pro
 245 250 255
 Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu Glu Arg Arg Asp Ala
 260 265 270
 Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser Ala Pro Gly Asp Gln
 275 280 285
 Leu Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Ala Pro Ala Ala
 290 295 300
 Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro
 305 310 315 320
 Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile
 325 330 335
 Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu
 340 345 350
 Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg
 355 360 365
 Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys Gly Ser Gly Thr Arg
 370 375 380
 Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala Ser Leu Leu Val Ala
 385 390 395 400
 Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn
 405 410 415

Leu Asp Thr Phe Leu Arg Thr His Asp Gly Gln Phe Thr Ile Met Gln
 725 730 735

Leu Val Gly Met Leu Arg Gly Val Gly Ala Gly Met Arg Tyr Leu Ser
 740 745 750

Asp Leu Gly Tyr Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
 755 760 765

Asp Ser Asn Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Val
 770 775 780

Leu Glu Asp Asp Pro Asp Ala Ala Tyr Thr Thr Thr Gly Gly Lys Ile
 785 790 795 800

Pro Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Phe Arg Thr Phe Ser
 805 810 815

Ser Ala Ser Asp Val Trp Ser Phe Gly Val Val Met Trp Glu Val Leu
 820 825 830

Ala Tyr Gly Glu Arg Pro Tyr Trp Asn Met Thr Asn Arg Asp Val Ile
 835 840 845

Ser Ser Val Glu Glu Gly Tyr Arg Leu Pro Ala Pro Met Gly Cys Pro
 850 855 860

His Ala Leu His Gln Leu Met Leu Asp Cys Trp His Lys Asp Arg Ala
 865 870 875 880

Gln Arg Pro Arg Phe Ser Gln Ile Val Ser Val Leu Asp Ala Leu Ile
 885 890 895

Arg Ser Pro Glu Ser Leu Arg Ala Thr Ala Thr Val Ser Arg Cys Pro
 900 905 910

Pro Pro Ala Phe Val Arg Ser Cys Phe Asp Leu Arg Gly Gly Ser Gly
 915 920 925

Gly Gly Gly Gly Leu Thr Val Gly Asp Trp Leu Asp Ser Ile Arg Met
 930 935 940

Gly Arg Tyr Arg Asp His Phe Ala Ala Gly Gly Tyr Ser Ser Leu Gly
 945 950 955 960

Met Val Leu Arg Met Asn Ala Gln Asp Val Arg Ala Leu Gly Ile Thr
 965 970 975

Leu Met Gly His Gln Lys Lys Ile Leu Gly Ser Ile Gln Thr Met Arg
 980 985 990

<211> 450

<212> PRT

<213> Mus musculus

<400> 54

Met	Ala	Pro	Ala	Arg	Ala	Arg	Leu	Ser	Pro	Ala	Leu	Trp	Val	Val	Thr	
1				5					10						15	
Ala	Ala	Ala	Ala	Ala	Thr	Cys	Val	Ser	Ala	Gly	Arg	Gly	Glu	Val	Asn	
			20					25					30			
Leu	Leu	Asp	Thr	Ser	Thr	Ile	His	Gly	Asp	Trp	Gly	Trp	Leu	Thr	Tyr	
		35					40					45				
Pro	Ala	His	Gly	Trp	Asp	Ser	Ile	Asn	Glu	Val	Asp	Glu	Ser	Phe	Arg	
	50					55					60					
Pro	Ile	His	Thr	Tyr	Gln	Val	Cys	Asn	Val	Met	Ser	Pro	Asn	Gln	Asn	
65					70					75					80	
Asn	Trp	Leu	Arg	Thr	Asn	Trp	Val	Pro	Arg	Asp	Gly	Ala	Arg	Arg	Val	
				85					90					95		
Tyr	Ala	Glu	Ile	Lys	Phe	Thr	Leu	Arg	Asp	Cys	Asn	Ser	Ile	Pro	Gly	
			100					105					110			
Val	Leu	Gly	Thr	Cys	Lys	Glu	Thr	Phe	Asn	Leu	His	Tyr	Leu	Glu	Ser	
		115					120					125				
Asp	Arg	Asp	Leu	Gly	Ala	Ser	Thr	Gln	Glu	Ser	Gln	Phe	Leu	Lys	Ile	
		130					135				140					
Asp	Thr	Ile	Ala	Ala	Asp	Glu	Ser	Phe	Thr	Gly	Ala	Asp	Leu	Gly	Val	
145					150					155					160	
Arg	Arg	Leu	Lys	Leu	Asn	Thr	Glu	Val	Arg	Gly	Val	Gly	Pro	Leu	Ser	
				165					170					175		
Lys	Arg	Gly	Phe	Tyr	Leu	Ala	Phe	Gln	Asp	Ile	Gly	Ala	Cys	Leu	Ala	
			180					185					190			
Ile	Leu	Ser	Leu	Arg	Ile	Tyr	Tyr	Lys	Lys	Cys	Pro	Ala	Met	Val	Arg	
		195					200					205				
Asn	Leu	Ala	Ala	Phe	Ser	Glu	Ala	Val	Thr	Gly	Ala	Asp	Ser	Ser	Ser	
		210					215				220					
Leu	Val	Glu	Val	Arg	Gly	Gln	Cys	Val	Arg	His	Ser	Glu	Glu	Arg	Asp	
225					230					235					240	
Thr	Pro	Lys	Met	Tyr	Cys	Ser	Ala	Glu	Gly	Glu	Trp	Leu	Val	Pro	Ile	
				245					250					255		
Gly	Lys	Cys	Val	Cys	Ser	Ala	Gly	Tyr	Glu	Glu	Arg	Arg	Asp	Ala	Cys	
			260					265					270			
Met	Ala	Cys	Glu	Leu	Gly	Phe	Tyr	Lys	Ser	Ala	Pro	Gly	Asp	Gln	Leu	

275	280	285
Cys Ala Arg Cys Pro Pro His Ser His Ser Ala Thr Pro Ala Ala Gln		
290	295	300
Thr Cys Arg Cys Asp Leu Ser Tyr Tyr Arg Ala Ala Leu Asp Pro Pro		
305	310	315
Ser Ala Ala Cys Thr Arg Pro Pro Ser Ala Pro Val Asn Leu Ile Ser		
325	330	335
Ser Val Asn Gly Thr Ser Val Thr Leu Glu Trp Ala Pro Pro Leu Asp		
340	345	350
Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn Ala Val Cys Arg Arg Cys		
355	360	365
Pro Trp Ala Leu Ser His Cys Glu Ala Cys Gly Ser Gly Thr Arg Phe		
370	375	380
Val Pro Gln Gln Thr Ser Leu Ala Gln Ala Ser Leu Leu Val Ala Asn		
385	390	395
Leu Leu Ala His Met Asn Tyr Ser Phe Trp Ile Glu Ala Val Asn Gly		
405	410	415
Val Ser Asn Leu Ser Pro Glu Pro Arg Ser Ala Ala Val Val Asn Ile		
420	425	430
Thr Thr Asn Gln Ala Ala Pro Ser Gln Val Val Val Ile Arg Gln Glu		
435	440	445
Arg Ala		
450		

<210> 55

<211> 480

<212> PRT

<213> Homo sapiens

<400> 55

Met Arg Gly Ser Gly Pro Arg Gly Ala Gly His Arg Arg Pro Pro Ser
1 5 10 15

Gly Gly Gly Asp Thr Pro Ile Thr Pro Ala Ser Leu Ala Gly Cys Tyr
20 25 30

Ser Ala Pro Arg Arg Ala Pro Leu Trp Thr Cys Leu Leu Leu Cys Ala
35 40 45

Ala Leu Arg Thr Leu Leu Ala Ser Pro Ser Asn Glu Val Asn Leu Leu
50 55 60

Asp Ser Arg Thr Val Met Gly Asp Leu Gly Trp Ile Ala Phe Pro Lys
65 70 75 80

Gly Arg Lys Asp Val Ser Tyr Tyr Ile Ala Cys Lys Lys Cys Asn Ser
 385 390 395 400
 His Ala Gly Val Cys Glu Glu Cys Gly Gly His Val Arg Tyr Leu Pro
 405 410 415
 Arg Gln Ser Gly Leu Lys Asn Thr Ser Val Met Met Val Asp Leu Leu
 420 425 430
 Ala His Thr Asn Tyr Thr Phe Glu Ile Glu Ala Val Asn Gly Val Ser
 435 440 445
 Asp Leu Ser Pro Gly Ala Arg Gln Tyr Val Ser Val Asn Val Thr Thr
 450 455 460
 Asn Gln Ala Ala Pro Ser Pro Val Thr Asn Val Lys Lys Gly Lys Ile
 465 470 475 480

<210> 56
 <211> 456
 <212> PRT
 <213> Gallus gallus

<400> 56
 Met Gly Leu Arg Gly Gly Gly Gly Arg Ala Gly Gly Pro Ala Pro Gly
 1 5 10 15
 Trp Thr Cys Leu Leu Leu Cys Ala Ala Leu Arg Ser Leu Leu Ala Ser
 20 25 30
 Pro Gly Ser Glu Val Asn Leu Leu Asp Ser Arg Thr Val Met Gly Asp
 35 40 45
 Leu Gly Trp Ile Ala Tyr Pro Lys Asn Gly Trp Glu Glu Ile Gly Glu
 50 55 60
 Val Asp Glu Asn Tyr Ala Pro Ile His Thr Tyr Gln Val Cys Lys Val
 65 70 75 80
 Met Glu Gln Asn Gln Asn Asn Trp Leu Leu Thr Ser Trp Ile Ser Asn
 85 90 95
 Glu Gly Arg Pro Ala Ser Ser Phe Glu Leu Lys Phe Thr Leu Arg Asp
 100 105 110
 Cys Asn Ser Leu Pro Gly Gly Leu Gly Thr Cys Lys Glu Thr Phe Asn
 115 120 125
 Met Tyr Tyr Phe Glu Ser Asp Asp Glu Asp Gly Arg Asn Ile Arg Glu
 130 135 140
 Asn Gln Tyr Ile Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
 145 150 155 160

Glu	Leu	Asp	Leu	Gly	Asp	Arg	Val	Met	Lys	Leu	Asn	Thr	Glu	Val	Arg	165	170	175
Asp	Val	Gly	Pro	Leu	Thr	Lys	Lys	Gly	Phe	Tyr	Leu	Ala	Phe	Gln	Asp	180	185	190
Val	Gly	Ala	Cys	Ile	Ala	Leu	Val	Ser	Val	Arg	Val	Tyr	Tyr	Lys	Lys	195	200	205
Cys	Pro	Ser	Val	Ile	Arg	Asn	Leu	Ala	Arg	Phe	Pro	Asp	Thr	Ile	Thr	210	215	220
Gly	Ala	Asp	Ser	Ser	Gln	Leu	Leu	Glu	Val	Ser	Gly	Val	Cys	Val	Asn	225	230	235
His	Ser	Val	Thr	Asp	Glu	Ala	Pro	Lys	Met	His	Cys	Ser	Ala	Glu	Gly	245	250	255
Glu	Trp	Leu	Val	Pro	Ile	Gly	Lys	Cys	Leu	Cys	Lys	Ala	Gly	Tyr	Glu	260	265	270
Glu	Lys	Asn	Asn	Thr	Cys	Gln	Val	Cys	Arg	Pro	Gly	Phe	Phe	Lys	Ala	275	280	285
Ser	Pro	His	Ser	Pro	Ser	Cys	Ser	Lys	Cys	Pro	Pro	His	Ser	Tyr	Thr	290	295	300
Leu	Asp	Glu	Ala	Ser	Thr	Ser	Cys	Leu	Cys	Glu	Glu	His	Tyr	Phe	Arg	305	310	315
Arg	Glu	Ser	Asp	Pro	Pro	Thr	Met	Ala	Cys	Thr	Arg	Pro	Pro	Ser	Ala	325	330	335
Pro	Arg	Ser	Ala	Ile	Ser	Asn	Val	Asn	Glu	Thr	Ser	Val	Phe	Leu	Glu	340	345	350
Trp	Ile	Pro	Pro	Ala	Asp	Thr	Gly	Gly	Arg	Lys	Asp	Val	Ser	Tyr	Tyr	355	360	365
Ile	Ala	Cys	Lys	Lys	Cys	Asn	Ser	His	Ser	Gly	Leu	Cys	Glu	Ala	Cys	370	375	380
Gly	Ser	His	Val	Arg	Tyr	Leu	Pro	Gln	Gln	Thr	Gly	Leu	Lys	Asn	Thr	385	390	395
Ser	Val	Met	Met	Val	Asp	Leu	Leu	Ala	His	Thr	Asn	Tyr	Thr	Phe	Glu	405	410	415
Ile	Glu	Ala	Val	Asn	Gly	Val	Ser	Asp	Gln	Asn	Pro	Gly	Ala	Arg	Gln	420	425	430
Phe	Val	Ser	Val	Asn	Val	Thr	Thr	Asn	Gln	Ala	Ala	Pro	Ser	Pro	Val	435	440	445
Ser	Ser	Val	Lys	Lys	Gly	Lys	Ile									450	455	

<210> 57
 <211> 649
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Ile Ser Ala Ala Trp Ser Ile Phe Leu Ile Gly Thr Lys Ile Gly
 1 5 10 15
 Leu Phe Leu Gln Val Ala Pro Leu Ser Val Met Ala Lys Ser Cys Pro
 20 25 30
 Ser Val Cys Arg Cys Asp Ala Gly Phe Ile Tyr Cys Asn Asp Arg Phe
 35 40 45
 Leu Thr Ser Ile Pro Thr Gly Ile Pro Glu Asp Ala Thr Thr Leu Tyr
 50 55 60
 Leu Gln Asn Asn Gln Ile Asn Asn Ala Gly Ile Pro Ser Asp Leu Lys
 65 70 75 80
 Asn Leu Leu Lys Val Glu Arg Ile Tyr Leu Tyr His Asn Ser Leu Asp
 85 90 95
 Glu Phe Pro Thr Asn Leu Pro Lys Tyr Val Lys Glu Leu His Leu Gln
 100 105 110
 Glu Asn Asn Ile Arg Thr Ile Thr Tyr Asp Ser Leu Ser Lys Ile Pro
 115 120 125
 Tyr Leu Glu Glu Leu His Leu Asp Asp Asn Ser Val Ser Ala Val Ser
 130 135 140
 Ile Glu Glu Gly Ala Phe Arg Asp Ser Asn Tyr Leu Arg Leu Leu Phe
 145 150 155 160
 Leu Ser Arg Asn His Leu Ser Thr Ile Pro Trp Gly Leu Pro Arg Thr
 165 170 175
 Ile Glu Glu Leu Arg Leu Asp Asp Asn Arg Ile Ser Thr Ile Ser Ser
 180 185 190
 Pro Ser Leu Gln Gly Leu Thr Ser Leu Lys Arg Leu Val Leu Asp Gly
 195 200 205
 Asn Leu Leu Asn Asn His Gly Leu Gly Asp Lys Val Phe Phe Asn Leu
 210 215 220
 Val Asn Leu Thr Glu Leu Ser Leu Val Arg Asn Ser Leu Thr Ala Ala
 225 230 235 240
 Pro Val Asn Leu Pro Gly Thr Asn Leu Arg Lys Leu Tyr Leu Gln Asp
 245 250 255
 Asn His Ile Asn Arg Val Pro Pro Asn Ala Phe Ser Tyr Leu Arg Gln

260										265					270				
Leu	Tyr	Arg	Leu	Asp	Met	Ser	Asn	Asn	Asn	Leu	Ser	Asn	Leu	Pro	Gln				
		275					280					285							
Gly	Ile	Phe	Asp	Asp	Leu	Asp	Asn	Ile	Thr	Gln	Leu	Ile	Leu	Arg	Asn				
	290					295					300								
Asn	Pro	Trp	Tyr	Cys	Gly	Cys	Lys	Met	Lys	Trp	Val	Arg	Asp	Trp	Leu				
305					310					315					320				
Gln	Ser	Leu	Pro	Val	Lys	Val	Asn	Val	Arg	Gly	Leu	Met	Cys	Gln	Ala				
				325					330					335					
Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile	Lys	Asp	Leu	Asn	Ala	Glu	Leu				
			340					345					350						
Phe	Asp	Cys	Lys	Asp	Ser	Gly	Ile	Val	Ser	Thr	Ile	Gln	Ile	Thr	Thr				
		355					360					365							
Ala	Ile	Pro	Asn	Thr	Val	Tyr	Pro	Ala	Gln	Gly	Gln	Trp	Pro	Ala	Pro				
	370					375					380								
Val	Thr	Lys	Gln	Pro	Asp	Ile	Lys	Asn	Pro	Lys	Leu	Thr	Lys	Asp	His				
385					390					395					400				
Gln	Thr	Thr	Gly	Ser	Pro	Ser	Arg	Lys	Thr	Ile	Thr	Ile	Thr	Val	Lys				
				405					410					415					
Ser	Val	Thr	Ser	Asp	Thr	Ile	His	Ile	Ser	Trp	Lys	Leu	Ala	Leu	Pro				
			420					425					430						
Met	Thr	Ala	Leu	Arg	Leu	Ser	Trp	Leu	Lys	Leu	Gly	His	Ser	Pro	Ala				
		435					440					445							
Phe	Gly	Ser	Ile	Thr	Glu	Thr	Ile	Val	Thr	Gly	Glu	Arg	Ser	Glu	Tyr				
	450					455					460								
Leu	Val	Thr	Ala	Leu	Glu	Pro	Asp	Ser	Pro	Tyr	Lys	Val	Cys	Met	Val				
465					470					475					480				
Pro	Met	Glu	Thr	Ser	Asn	Leu	Tyr	Leu	Phe	Asp	Glu	Thr	Pro	Val	Cys				
				485					490					495					
Ile	Glu	Thr	Glu	Thr	Ala	Pro	Leu	Arg	Met	Tyr	Asn	Pro	Thr	Thr	Thr				
			500					505					510						
Leu	Asn	Arg	Glu	Gln	Glu	Lys	Glu	Pro	Tyr	Lys	Asn	Pro	Asn	Leu	Pro				
		515					520					525							
Leu	Ala	Ala	Ile	Ile	Gly	Gly	Ala	Val	Ala	Leu	Val	Thr	Ile	Ala	Leu				
	530					535					540								
Leu	Ala	Leu	Val	Cys	Trp	Tyr	Val	His	Arg	Asn	Gly	Ser	Leu	Phe	Ser				
545					550					555					560				
Arg	Asn	Cys	Ala	Tyr	Ser	Lys	Gly	Arg	Arg	Arg	Lys	Asp	Asp	Tyr	Ala				

	565		570		575
Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Glu Thr					
	580		585		590
Ser Phe Gln Met Leu Pro Ile Ser Asn Glu Pro Ile Ser Lys Glu Glu					
	595		600		605
Phe Val Ile His Thr Ile Phe Pro Pro Asn Gly Met Asn Leu Tyr Lys					
	610		615		620
Asn Asn His Ser Glu Ser Ser Ser Asn Arg Ser Tyr Arg Asp Ser Gly					
	625		630		635
					640
Ile Pro Asp Ser Asp His Ser His Ser					
	645				

<210> 58
 <211> 660
 <212> PRT
 <213> Homo sapiens

<400> 58

Met Gly Leu Gln Thr Thr Lys Trp Pro Ser His Gly Ala Phe Phe Leu															
1			5				10								15
Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val Ser Lys															
			20				25							30	
Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr															
		35					40					45			
Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly															
	50					55				60					
Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe															
	65				70				75						80
Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr															
				85				90						95	
Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg															
			100				105						110		
Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala															
	115					120					125				
Leu Ala Gln Leu Leu Lys Leu Glu Glu Leu His Leu Asp Asp Asn Ser															
	130				135					140					
Ile Ser Thr Val Gly Val Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser															
	145				150				155						160
Leu Lys Leu Leu Phe Leu Ser Lys Asn His Leu Ser Ser Val Pro Val															
			165					170						175	

Gly	Leu	Pro	Val	Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile	180	185	190
Ala	Val	Ile	Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg	195	200	205
Leu	Ile	Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly	210	215	220
Thr	Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn	225	230	235
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile	Arg	245	250	255
Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr	Ala	Phe	260	265	270
Ser	Asn	Leu	Arg	Lys	Leu	Glu	Arg	Leu	Asp	Ile	Ser	Asn	Asn	Gln	Leu	275	280	285
Arg	Met	Leu	Thr	Gln	Gly	Val	Phe	Asp	Asn	Leu	Ser	Asn	Leu	Lys	Gln	290	295	300
Leu	Thr	Ala	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Asp	Cys	Ser	Ile	Lys	Trp	305	310	315
Val	Thr	Glu	Trp	Leu	Lys	Tyr	Ile	Pro	Ser	Ser	Leu	Asn	Val	Arg	Gly	325	330	335
Phe	Met	Cys	Gln	Gly	Pro	Glu	Gln	Val	Arg	Gly	Met	Ala	Val	Arg	Glu	340	345	350
Leu	Asn	Met	Asn	Leu	Leu	Ser	Cys	Pro	Thr	Thr	Thr	Pro	Gly	Leu	Pro	355	360	365
Leu	Phe	Thr	Pro	Ala	Pro	Ser	Thr	Ala	Ser	Pro	Thr	Thr	Gln	Pro	Pro	370	375	380
Thr	Leu	Ser	Ile	Pro	Asn	Pro	Ser	Arg	Ser	Tyr	Thr	Pro	Pro	Thr	Pro	385	390	395
Thr	Thr	Ser	Lys	Leu	Pro	Thr	Ile	Pro	Asp	Trp	Asp	Gly	Arg	Glu	Arg	405	410	415
Val	Thr	Pro	Pro	Ile	Ser	Glu	Arg	Ile	Gln	Leu	Ser	Ile	His	Phe	Val	420	425	430
Asn	Asp	Thr	Ser	Ile	Gln	Val	Ser	Trp	Leu	Ser	Leu	Phe	Thr	Val	Met	435	440	445
Ala	Tyr	Lys	Leu	Thr	Trp	Val	Lys	Met	Gly	His	Ser	Leu	Val	Gly	Gly	450	455	460
Ile	Val	Gln	Glu	Arg	Ile	Val	Ser	Gly	Glu	Lys	Gln	His	Leu	Ser	Leu	465	470	475

Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro Leu
 485 490 495
 Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser Glu Ala
 500 505 510
 Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr Ala Ser Ser
 515 520 525
 His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro Phe Leu Leu Ala
 530 535 540
 Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu Val Val Leu Leu Ser
 545 550 555 560
 Val Phe Cys Trp His Met His Lys Lys Gly Arg Tyr Thr Ser Gln Lys
 565 570 575
 Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp Asp Tyr Cys Glu Ala Gly
 580 585 590
 Thr Lys Lys Asp Asn Ser Ile Leu Glu Met Thr Glu Thr Ser Phe Gln
 595 600 605
 Ile Val Ser Leu Asn Asn Asp Gln Leu Leu Lys Gly Asp Phe Arg Leu
 610 615 620
 Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile Asn Tyr Thr Asp Cys His
 625 630 635 640
 Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser Ser Val Pro Asp Leu Glu
 645 650 655
 His Cys His Thr
 660

<210> 59
 <211> 674
 <212> PRT
 <213> Homo sapiens

<400> 59
 Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
 1 5 10 15
 Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
 20 25 30
 Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
 35 40 45
 Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
 50 55 60
 Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65 70 75 80

Asp	Asp	Ala	Thr	Thr	Leu	Tyr	Leu	Gln	Asn	Asn	Gln	Ile	Asn	Asn	Ala	
				85					90					95		
Gly	Ile	Pro	Gln	Asp	Leu	Lys	Thr	Lys	Val	Asn	Val	Gln	Val	Ile	Tyr	
			100					105					110			
Leu	Tyr	Glu	Asn	Asp	Leu	Asp	Glu	Phe	Pro	Ile	Asn	Leu	Pro	Arg	Ser	
		115					120					125				
Leu	Arg	Glu	Leu	His	Leu	Gln	Asp	Asn	Asn	Val	Arg	Thr	Ile	Ala	Arg	
	130					135					140					
Asp	Ser	Leu	Ala	Arg	Ile	Pro	Leu	Leu	Glu	Lys	Leu	His	Leu	Asp	Asp	
145					150					155					160	
Asn	Ser	Val	Ser	Thr	Val	Ser	Ile	Glu	Glu	Asp	Ala	Phe	Ala	Asp	Ser	
				165					170					175		
Lys	Gln	Leu	Lys	Leu	Leu	Phe	Leu	Ser	Arg	Asn	His	Leu	Ser	Ser	Ile	
			180					185					190			
Pro	Ser	Gly	Leu	Pro	His	Thr	Leu	Glu	Glu	Leu	Arg	Leu	Asp	Asp	Asn	
		195					200					205				
Arg	Ile	Ser	Thr	Ile	Pro	Leu	His	Ala	Phe	Lys	Gly	Leu	Asn	Ser	Leu	
	210					215					220					
Arg	Arg	Leu	Val	Leu	Asp	Gly	Asn	Leu	Leu	Ala	Asn	Gln	Arg	Ile	Ala	
225					230					235					240	
Asp	Asp	Thr	Phe	Ser	Arg	Leu	Gln	Asn	Leu	Thr	Glu	Leu	Ser	Leu	Val	
				245					250					255		
Arg	Asn	Ser	Leu	Ala	Ala	Pro	Pro	Leu	Asn	Leu	Pro	Ser	Ala	His	Leu	
			260					265					270			
Gln	Lys	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	Ile	Ser	His	Ile	Pro	Tyr	Asn	
		275					280					285				
Thr	Leu	Ala	Lys	Met	Arg	Glu	Leu	Glu	Arg	Leu	Asp	Leu	Ser	Asn	Asn	
	290					295					300					
Asn	Leu	Thr	Thr	Leu	Pro	Arg	Gly	Leu	Phe	Asp	Asp	Leu	Gly	Asn	Leu	
305					310					315					320	
Ala	Gln	Leu	Leu	Leu	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Gly	Cys	Asn	Leu	
				325					330					335		
Met	Trp	Leu	Arg	Asp	Trp	Val	Lys	Ala	Arg	Ala	Ala	Val	Val	Asn	Val	
			340					345						350		
Arg	Gly	Leu	Met	Cys	Gln	Gly	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile	
		355					360					365				
Lys	Asp	Ile	Thr	Ser	Glu	Met	Asp	Glu	Cys	Phe	Glu	Thr	Gly	Pro	Gln	
	370					375					380					

Gly Gly Val Ala Asn Ala Ala Ala Lys Thr Thr Ala Ser Asn His Ala
 385 390 395 400
 Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe Thr Leu Lys Ala Lys Arg
 405 410 415
 Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile Asp Tyr Pro Met Ala Thr
 420 425 430
 Gly Asp Gly Ala Lys Thr Leu Ala Ile His Val Lys Ala Leu Thr Ala
 435 440 445
 Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr Leu Pro Ala Ser Ser Phe
 450 455 460
 Arg Leu Ser Trp Leu Arg Leu Gly His Ser Pro Ala Val Gly Ser Ile
 465 470 475 480
 Thr Glu Thr Leu Val Gln Gly Asp Lys Thr Glu Tyr Leu Leu Thr Ala
 485 490 495
 Leu Glu Pro Lys Ser Thr Tyr Ile Ile Cys Met Val Thr Met Glu Thr
 500 505 510
 Ser Asn Ala Tyr Val Ala Asp Glu Thr Pro Val Cys Ala Lys Ala Glu
 515 520 525
 Thr Ala Asp Ser Tyr Gly Pro Thr Thr Thr Leu Asn Gln Glu Gln Asn
 530 535 540
 Ala Gly Pro Met Ala Ser Leu Pro Leu Ala Gly Ile Ile Gly Gly Ala
 545 550 555 560
 Val Ala Leu Val Phe Leu Phe Leu Val Leu Gly Ala Ile Cys Trp Tyr
 565 570 575
 Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg Ala Tyr Asn Arg
 580 585 590
 Gly Ser Arg Glu Lys Asp Asp Tyr Met Glu Ser Gly Thr Lys Lys Asp
 595 600 605
 Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln Met Leu Pro Ile
 610 615 620
 Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His Thr Ile Phe Pro
 625 630 635 640
 Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr Ile Gly Tyr Gly
 645 650 655
 Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp Ile Asp Tyr Ser
 660 665 670
 Tyr Thr

<210> 60
 <211> 674
 <212> PRT
 <213> Homo sapiens

<400> 60
 Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
 1 5 10 15
 Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
 20 25 30
 Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
 35 40 45
 Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
 50 55 60
 Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
 65 70 75 80
 Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
 85 90 95
 Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
 100 105 110
 Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
 115 120 125
 Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
 130 135 140
 Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
 145 150 155 160
 Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
 165 170 175
 Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
 180 185 190
 Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
 195 200 205
 Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
 210 215 220
 Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
 225 230 235 240
 Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
 245 250 255
 Arg Asn Ser Leu Ala Ala Pro Pro Leu Asn Leu Pro Ser Ala His Leu

260					265					270					
Gln	Lys	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	Ile	Ser	His	Ile	Pro	Tyr	Asn
	275						280					285			
Thr	Leu	Ala	Lys	Met	Arg	Glu	Leu	Glu	Arg	Leu	Asp	Leu	Ser	Asn	Asn
	290					295					300				
Asn	Leu	Thr	Thr	Leu	Pro	Arg	Gly	Leu	Phe	Asp	Asp	Leu	Gly	Asn	Leu
305					310					315					320
Ala	Gln	Leu	Leu	Leu	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Gly	Cys	Asn	Leu
				325					330					335	
Met	Trp	Leu	Arg	Asp	Trp	Val	Lys	Ala	Arg	Ala	Ala	Val	Val	Asn	Val
			340					345					350		
Arg	Gly	Leu	Met	Cys	Gln	Gly	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile
		355					360					365			
Lys	Asp	Ile	Thr	Ser	Glu	Met	Asp	Glu	Cys	Phe	Glu	Thr	Gly	Pro	Gln
	370					375					380				
Gly	Gly	Val	Ala	Asn	Ala	Ala	Ala	Lys	Thr	Thr	Ala	Ser	Asn	His	Ala
385				390							395				400
Ser	Ala	Thr	Thr	Pro	Gln	Gly	Ser	Leu	Phe	Thr	Leu	Lys	Ala	Lys	Arg
				405					410					415	
Pro	Gly	Leu	Arg	Leu	Pro	Asp	Ser	Asn	Ile	Asp	Tyr	Pro	Met	Ala	Thr
			420					425					430		
Gly	Asp	Gly	Ala	Lys	Thr	Leu	Ala	Ile	His	Val	Lys	Ala	Leu	Thr	Ala
		435					440					445			
Asp	Ser	Ile	Arg	Ile	Thr	Trp	Lys	Ala	Thr	Leu	Pro	Ala	Ser	Ser	Phe
	450					455					460				
Arg	Leu	Ser	Trp	Leu	Arg	Leu	Gly	His	Ser	Pro	Ala	Val	Gly	Ser	Ile
465				470						475					480
Thr	Glu	Thr	Leu	Val	Gln	Gly	Asp	Lys	Thr	Glu	Tyr	Leu	Leu	Thr	Ala
			485					490						495	
Leu	Glu	Pro	Lys	Ser	Thr	Tyr	Ile	Ile	Cys	Met	Val	Thr	Met	Glu	Thr
		500						505					510		
Ser	Asn	Ala	Tyr	Val	Ala	Asp	Glu	Thr	Pro	Val	Cys	Ala	Lys	Ala	Glu
		515					520					525			
Thr	Ala	Asp	Ser	Tyr	Gly	Pro	Thr	Thr	Thr	Leu	Asn	Gln	Glu	Gln	Asn
	530					535					540				
Ala	Gly	Pro	Met	Ala	Ser	Leu	Pro	Leu	Ala	Gly	Ile	Ile	Gly	Gly	Ala
545				550						555					560
Val	Ala	Leu	Val	Phe	Leu	Phe	Leu	Val	Leu	Gly	Ala	Ile	Cys	Trp	Tyr

	565		570		575										
Val	His	Gln	Ala	Gly	Glu	Leu	Leu	Thr	Arg	Glu	Arg	Ala	Tyr	Asn	Arg
			580					585					590		
Gly	Ser	Arg	Glu	Lys	Asp	Asp	Tyr	Met	Glu	Ser	Gly	Thr	Lys	Lys	Asp
			595				600					605			
Asn	Ser	Ile	Leu	Glu	Ile	Arg	Gly	Pro	Gly	Leu	Gln	Met	Leu	Pro	Ile
			610				615					620			
Asn	Pro	Tyr	Arg	Ala	Lys	Glu	Glu	Tyr	Val	Val	His	Thr	Ile	Phe	Pro
					630						635				640
Ser	Asn	Gly	Ser	Ser	Leu	Cys	Lys	Ala	Thr	His	Thr	Ile	Gly	Tyr	Gly
				645					650					655	
Thr	Thr	Arg	Gly	Tyr	Arg	Asp	Gly	Gly	Ile	Pro	Asp	Ile	Asp	Tyr	Ser
			660					665					670		
Tyr	Thr														

<210> 61
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 61															
Pro	Met	Ala	Thr	Gly	Asp	Gly	Ala	Lys	Thr	Leu	Ala	Ile	His	Val	Lys
1				5					10					15	
Ala	Leu	Thr	Ala	Asp	Ser	Ile	Arg	Ile	Thr	Trp	Lys	Ala	Thr	Leu	Pro
			20					25					30		
Ala	Ser	Ser	Phe	Arg	Leu	Ser	Trp	Leu	Arg	Leu	Gly	His	Ser	Pro	Ala
			35				40					45			
Val	Gly	Ser	Ile	Thr	Glu	Thr	Leu	Val	Gln	Gly	Asp	Lys	Thr	Glu	Tyr
	50					55					60				
Leu	Leu	Thr	Ala	Leu	Glu	Pro	Lys	Ser	Thr	Tyr	Ile	Ile	Cys	Met	Val
	65				70					75					80
Thr	Met	Glu	Thr	Ser	Asn	Ala	Tyr	Val	Ala	Asp	Glu	Thr	Pro	Val	Cys
				85					90					95	
Ala	Lys	Ala	Glu	Thr	Ala	Asp	Ser	Tyr	Gly	Pro	Thr	Thr	Thr	Leu	Asn
			100					105						110	
Gln	Glu	Gln	Asn	Ala	Gly	Pro	Met	Ala	Ser	Leu	Pro	Leu	Ala	Gly	Ile
			115				120					125			
Ile	Gly	Gly	Ala	Val	Ala	Leu	Val	Phe	Leu	Phe	Leu	Val	Leu	Gly	Ala
	130					135					140				

Ile Cys Trp Tyr Val His Gln Ala Gly Glu Leu Leu Thr Arg Glu Arg
 145 150 155 160
 Ala Tyr Asn Arg Gly Ser Arg Lys Lys Asp Asp Tyr Met Glu Ser Gly
 165 170 175
 Thr Lys Lys Asp Asn Ser Ile Leu Glu Ile Arg Gly Pro Gly Leu Gln
 180 185 190
 Met Leu Pro Ile Asn Pro Tyr Arg Ala Lys Glu Glu Tyr Val Val His
 195 200 205
 Thr Ile Phe Pro Ser Asn Gly Ser Ser Leu Cys Lys Ala Thr His Thr
 210 215 220
 Ile Gly Tyr Gly Thr Thr Arg Gly Tyr Arg Asp Gly Gly Ile Pro Asp
 225 230 235 240
 Ile Asp Tyr Ser Tyr Thr
 245

210> 62
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 62
 Ile Ser Asn Asn Gln Leu Arg Met Leu Thr Gln Gly Val Phe Asp Asn
 1 5 10 15
 Leu Ser Asn Leu Lys Gln Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys
 20 25 30
 Asp Cys Ser Ile Lys Trp Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser
 35 40 45
 Ser Leu Asn Val Arg Gly Phe Met Cys Gln Gly Pro Glu Gln Val Arg
 50 55 60
 Gly Met Ala Val Arg Glu Leu Asn Met Asn Leu Leu Ser Cys Pro Thr
 65 70 75 80
 Thr Thr Pro Gly Leu Pro Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser
 85 90 95
 Pro Thr Thr Gln Pro Pro Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser
 100 105 110
 Tyr Thr Pro Pro Thr Pro Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp
 115 120 125
 Trp Asp Gly Arg Glu Arg Val Thr Pro Pro Ile Ser Glu Arg Ile Gln
 130 135 140
 Leu Ser Ile His Phe Val Asn Asp Thr Ser Ile Gln Val Ser Trp Leu
 145 150 155 160

Ser Leu Phe Thr Val Met Ala Tyr Lys Leu Thr Trp Val Lys Met Gly
 165 170 175
 His Ser Leu Val Gly Gly Ile Val Gln Glu Arg Ile Val Ser Gly Glu
 180 185 190
 Lys Gln His Leu Ser Leu Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg
 195 200 205
 Ile Cys Leu Val Pro Leu Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp
 210 215 220
 Thr Ile Cys Ser Glu Ala Thr Thr His Ala Ser Tyr Leu Asn Asn Gly
 225 230 235 240
 Ser Asn Thr Ala Ser Ser His Glu Gln Thr Thr Ser His Ser Met Gly
 245 250 255
 Ser Pro Phe Leu Leu Ala Gly Leu Ile Gly Gly Ala Val Ile Phe Val
 260 265 270
 Leu Val Val Leu Leu Ser Val Phe Cys Trp His Met His Lys Lys Gly
 275 280 285
 Arg Tyr Thr Ser Gln Lys Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp
 290 295 300
 Asp Tyr Cys Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu Glu Met
 305 310 315 320
 Thr Glu Thr Ser Phe Gln Ile Val Ser Leu Asn Asn Asp Gln Leu Leu
 325 330 335
 Lys Gly Asp Phe Arg Leu Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile
 340 345 350
 Asn Tyr Thr Asp Cys His Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser
 355 360 365
 Ser Val Pro Asp Leu Glu His Cys His Thr
 370 375

<210> 63
 <211> 338
 <212> PRT
 <213> Gallus gallus

<400> 63
 Val His Ser Val Trp Thr Arg Thr Val Arg Gln Val Tyr Asn Glu Leu
 1 5 10 15
 Asp Pro Glu His Trp Ser His Tyr Thr Phe Glu Cys Pro Gln Glu Cys
 20 25 30
 Phe Cys Pro Pro Ser Phe Pro Asn Ala Leu Tyr Cys Asp Asn Lys Gly

35					40					45					
Leu	Lys	Glu	Ile	Pro	Ala	Ile	Pro	Ala	Arg	Ile	Trp	Tyr	Leu	Tyr	Leu
	50					55					60				
Gln	Asn	Asn	Leu	Ile	Glu	Thr	Ile	Ser	Glu	Lys	Pro	Phe	Val	Asn	Ala
65					70					75					80
Thr	His	Leu	Arg	Trp	Ile	Asn	Leu	Asn	Lys	Asn	Lys	Ile	Thr	Asn	Asn
				85					90					95	
Gly	Ile	Glu	Ser	Gly	Val	Leu	Ser	Lys	Leu	Lys	Arg	Leu	Leu	Tyr	Leu
			100					105					110		
Phe	Leu	Glu	Asp	Asn	Glu	Leu	Glu	Glu	Val	Pro	Ala	Pro	Leu	Pro	Val
		115					120					125			
Gly	Leu	Glu	Gln	Leu	Arg	Leu	Ala	Arg	Asn	Lys	Ile	Ser	Arg	Ile	Pro
	130					135					140				
Glu	Gly	Val	Phe	Ser	Asn	Leu	Glu	Asn	Leu	Thr	Met	Leu	Asp	Leu	His
145					150					155					160
Gln	Asn	Asn	Leu	Leu	Asp	Ser	Ala	Leu	Gln	Ser	Asp	Thr	Phe	Gln	Gly
				165					170					175	
Leu	Asn	Ser	Leu	Met	Gln	Leu	Asn	Ile	Ala	Lys	Asn	Ser	Leu	Lys	Lys
			180					185					190		
Met	Pro	Leu	Ser	Ile	Pro	Ala	Asn	Thr	Leu	Gln	Leu	Phe	Leu	Asp	Asn
		195					200					205			
Asn	Ser	Ile	Glu	Val	Ile	Pro	Glu	Asn	Tyr	Phe	Ser	Ala	Ile	Pro	Lys
	210					215					220				
Val	Thr	Phe	Leu	Arg	Leu	Asn	Tyr	Asn	Lys	Leu	Ser	Asp	Asp	Gly	Ile
225					230					235					240
Pro	Pro	Asn	Gly	Phe	Asn	Val	Ser	Ser	Ile	Leu	Asp	Leu	Gln	Leu	Ser
				245					250					255	
His	Asn	Gln	Leu	Thr	Lys	Ile	Pro	Pro	Ile	Asn	Ala	His	Leu	Glu	His
			260					265					270		
Leu	His	Leu	Asp	His	Asn	Arg	Ile	Lys	Ser	Val	Asn	Gly	Thr	Gln	Ile
		275					280					285			
Cys	Pro	Val	Ser	Ile	Ala	Val	Ala	Glu	Asp	Tyr	Gly	Leu	Tyr	Gly	Asn
	290					295					300				
Ile	Pro	Arg	Leu	Arg	Tyr	Leu	Arg	Leu	Asp	Gly	Asn	Glu	Ile	Gln	Pro
305					310					315					320
Pro	Ile	Pro	Leu	Asp	Ile	Met	Ile	Cys	Phe	Gln	Leu	Leu	Gln	Ala	Val
				325					330					335	
Val	Ile														

<210> 64
 <211> 326
 <212> PRT
 <213> Bos taurus

<400> 64
 Pro Tyr Glu Pro Tyr Pro Thr Gly Glu Glu Gly Pro Ala Tyr Ala Tyr
 1 5 10 15
 Gly Ser Pro Pro Gln Pro Glu Pro Arg Asp Cys Pro Gln Glu Cys Asp
 20 25 30
 Cys Pro Pro Asn Phe Pro Thr Ala Met Tyr Cys Asp Asn Arg Asn Leu
 35 40 45
 Lys Tyr Leu Pro Phe Val Pro Ser Arg Met Lys Tyr Val Tyr Phe Gln
 50 55 60
 Asn Asn Gln Ile Ser Ser Ile Gln Glu Gly Val Phe Asp Asn Ala Thr
 65 70 75 80
 Gly Leu Leu Trp Ile Ala Leu His Gly Asn Gln Ile Thr Ser Asp Lys
 85 90 95
 Val Gly Lys Lys Val Phe Ser Lys Leu Arg His Leu Glu Arg Leu Tyr
 100 105 110
 Leu Asp His Asn His Leu Thr Arg Ile Pro Ser Pro Leu Pro Arg Ser
 115 120 125
 Leu Arg Glu Leu His Leu Asp His Asn Gln Ile Ser Arg Val Pro Asn
 130 135 140
 Asn Ala Leu Glu Gly Leu Glu Asn Leu Thr Ala Leu Tyr Leu His His
 145 150 155 160
 Glu Ile Gln Glu Val Gly Ser Ser Met Lys Gly Leu Arg Ser Leu Ile
 165 170 175
 Leu Leu Asp Leu Ser Tyr Asn His Leu Arg Lys Val Pro Asp Gly Leu
 180 185 190
 Pro Ser Ala Leu Glu Gln Leu Tyr Leu Glu His Asn Asn Val Phe Ser
 195 200 205
 Val Pro Asp Ser Tyr Phe Arg Gly Ser Pro Lys Leu Leu Tyr Val Arg
 210 215 220
 Leu Ser His Asn Ser Leu Thr Asn Asn Gly Leu Ala Ser Asn Thr Phe
 225 230 235 240
 Asn Ser Ser Ser Leu Leu Glu Leu Asp Leu Ser Tyr Asn Gln Leu Gln
 245 250 255

Lys Ile Pro Pro Val Ser Thr Asn Leu Glu Asn Leu Tyr Leu Gln Gly
 260 265 270
 Asn Arg Ile Asn Glu Phe Ser Ile Ser Ser Phe Cys Thr Val Val Asp
 275 280 285
 Val Met Asn Phe Ser Lys Leu Gln Val Gln Arg Leu Asp Gly Asn Glu
 290 295 300
 Ile Lys Arg Ser Ala Met Pro Ala Asp Ala Pro Leu Cys Leu Arg Leu
 305 310 315 320
 Ala Ser Leu Ile Glu Ile
 325

<210> 65
 <211> 1020
 <212> DNA
 <213> Homo sapiens

<400> 65
 gcgcgcggcg aagtgaattt gctggacacg tcgaccatcc acgggggactg gggctggctc 60
 acgtatccgg ctcattgggtg ggactccatc aacgaggtgg acgagtcctt ccagcccatc 120
 cacacgtacc aggtttgcaa cgtcatgagc cccaaccaga acaactggct gcgcacgagc 180
 tgggtccccc gagacggcgc ccggcgcgtc tatgctgaga tcaagtttac cctgcgcgac 240
 tgcaacagca tgcttggtgt gctgggcacc tgcaaggaga ccttcaacct ctactacctg 300
 gagtcggacc gcgacctggg ggccagcaca caagaaagcc agttcctcaa aatcgacacc 360
 attgcgggcg acgagagctt cacaggtgcc gaccttgggtg tgcggcgtct caagctcaac 420
 acggaggtgc gcagtgtggg tccccctcagc aagcgcggct tctacctggc cttccaggac 480
 ataggtgcct gcctggccat cctctctctc cgcattctact ataagaagtg ccctgccatg 540
 gtgcgcaatc tggctgcctt ctcgaggcca gtgacggggg ccgactcgtc ctactgggtg 600
 gaggtgaggg gccagtgcgt gcggcactca gaggagcggg acacacccaa gatgtactgc 660
 agcgcggagg gcgagtggct cgtgcccacg ggcaaatgcg tgtgcagtgc cggctacgag 720
 gagcggcggg atgcctgtgt ggctgtgag ctgggcttct acaagtcagc ccctggggac 780
 cagctgtgtg ccgctgccc tccccacagc cactccgcag ctccagccgc ccaagcctgc 840
 cactgtgacc tcagctacta ccgtgcagcc ctggacccgc cgctcctcagc ctgcacccgg 900
 ccaccctcgg caccagtga cctgatctcc agtgtgaatg ggacatcagt gactctggag 960
 tgggcccctc ccctggaccc aggtggcgcg agtgacatca cctacaatgc cgtgtgccgc 1020

<210> 66
 <211> 515
 <212> PRT
 <213> Homo sapiens

<400> 66
 Ala Arg Gly Glu Val Asn Leu Leu Asp Thr Ser Thr Ile His Gly Asp
 1 5 10 15
 Trp Gly Trp Leu Thr Tyr Pro Ala His Gly Trp Asp Ser Ile Asn Glu
 20 25 30
 Val Asp Glu Ser Phe Gln Pro Ile His Thr Tyr Gln Val Cys Asn Val
 35 40 45

Met Ser Pro Asn Gln Asn Asn Trp Leu Arg Thr Ser Trp Val Pro Arg
50 55 60
Asp Gly Ala Arg Arg Val Tyr Ala Glu Ile Lys Phe Thr Leu Arg Asp
65 70 75 80
Cys Asn Ser Met Pro Gly Val Leu Gly Thr Cys Lys Glu Thr Phe Asn
85 90 95
Leu Tyr Tyr Leu Glu Ser Asp Arg Asp Leu Gly Ala Ser Thr Gln Glu
100 105 110
Ser Gln Phe Leu Lys Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr
115 120 125
Gly Ala Asp Leu Gly Val Arg Arg Leu Lys Leu Asn Thr Glu Val Arg
130 135 140
Ser Val Gly Pro Leu Ser Lys Arg Gly Phe Tyr Leu Ala Phe Gln Asp
145 150 155 160
Ile Gly Ala Cys Leu Ala Ile Leu Ser Leu Arg Ile Tyr Tyr Lys Lys
165 170 175
Cys Pro Ala Met Val Arg Asn Leu Ala Ala Phe Ser Glu Ala Val Thr
180 185 190
Gly Ala Asp Ser Ser Ser Leu Val Glu Val Arg Gly Gln Cys Val Arg
195 200 205
His Ser Glu Glu Arg Asp Thr Pro Lys Met Tyr Cys Ser Ala Glu Gly
210 215 220
Glu Trp Leu Val Pro Ile Gly Lys Cys Val Cys Ser Ala Gly Tyr Glu
225 230 235 240
Glu Arg Arg Asp Ala Cys Val Ala Cys Glu Leu Gly Phe Tyr Lys Ser
245 250 255
Ala Pro Gly Asp Gln Leu Cys Ala Arg Cys Pro Pro His Ser His Ser
260 265 270
Ala Ala Pro Ala Ala Gln Ala Cys His Cys Asp Leu Ser Tyr Tyr Arg
275 280 285
Ala Ala Leu Asp Pro Pro Ser Ser Ala Cys Thr Arg Pro Pro Ser Ala
290 295 300
Pro Val Asn Leu Ile Ser Ser Val Asn Gly Thr Ser Val Thr Leu Glu
305 310 315 320
Trp Ala Pro Pro Leu Asp Pro Gly Gly Arg Ser Asp Ile Thr Tyr Asn
325 330 335
Ala Val Cys Arg Arg Cys Pro Trp Ala Leu Ser Arg Cys Glu Ala Cys
340 345 350

Gly Ser Gly Thr Arg Phe Val Pro Gln Gln Thr Ser Leu Val Gln Ala
 355 360 365
 Ser Leu Leu Val Ala Asn Leu Leu Ala His Met Asn Tyr Ser Phe Trp
 370 375 380
 Ile Glu Ala Val Asn Gly Val Ser Asp Leu Ser Pro Glu Pro Arg Arg
 385 390 395 400
 Ala Ala Val Val Asn Ile Thr Thr Asn Gln Ala Ala Pro Ser Gln Val
 405 410 415
 Val Val Ile Arg Gln Glu Arg Ala Gly Gln Thr Ser Val Ser Leu Leu
 420 425 430
 Trp Gln Glu Pro Glu Gln Pro Asn Gly Ile Ile Leu Glu Tyr Glu Ile
 435 440 445
 Lys Tyr Tyr Glu Lys Asp Lys Glu Met Gln Ser Tyr Ser Thr Leu Lys
 450 455 460
 Ala Val Thr Thr Arg Ala Thr Val Ser Gly Leu Lys Pro Gly Thr Arg
 465 470 475 480
 Tyr Val Phe Gln Val Arg Ala Arg Thr Ser Ala Gly Cys Gly Arg Phe
 485 490 495
 Ser Gln Ala Met Glu Val Glu Thr Gly Lys Pro Arg Pro Arg Tyr Asp
 500 505 510
 Thr Arg Thr
 515

<210> 67
 <211> 1992
 <212> DNA
 <213> Homo sapiens

<400> 67
 atggtggtgg cacacccac cgccactgcc accaccacgc ccaactgccac tgtcacggcc 60
 accgttgtga tgaccacggc caccatggac ctgcgggact ggctgttct ctgctacggg 120
 ctcatcgctt tcctgacgga ggatcatcgac agcaccacct gcccctcggt gtgccgctgc 180
 gacaacggct tcattctactg caacgacggg ggactcacat ccatccccgc agatatccct 240
 gatgatgcca ccaccctcta cctgcagaac aaccagatca acaacgccgg catccccag 300
 gacctcaaga ccaaggtcaa cgtgcaggtc atctacctat acgagaatga cctggatgag 360
 ttccccatca acctgccccg ctccctccgg gagctgcacc tgcaggacaa caatgtgcgc 420
 accattgcca gggactcgct ggcccgcatc ccgctgctgg agaagctgca cctggatgac 480
 aactccgtgt ccaccgtcag cattgaggag gacgccttcg ccgacagcaa acagctcaag 540
 ctgctcttcc tgagccggaa ccacctgagc agcatcccct cggggctgcc gcacacgctg 600
 gagagctgc ggctggatga caacgcacat tccaccatcc cgctgcatgc cttcaagggc 660
 ctcaacagcc tgccggcgctt ggtgctggac ggtaacctgc tggccaacca gcgcatgcc 720
 gacgacacct tcagccgcct acagaacctc acagagctct cgctgggtgcg caattcgctg 780
 gccgcgccac cctctacct gcaggacaat gccatcagcc acatccccta caacacgctg 840
 gccaaagtgc gtgagctgga gcggctggac ctgtccaaca acaacctgac cacgctgccc 900
 cgcggcctgt tcgacgacct ggggaacctg gccagctgc tgctcaggaa caacccttgg 960
 ttttgtggct gcaacctcat gtggctgcgg gactgggtga aggcacgggc ggccgtggtc 1020

```

aacgtgctggg gcctcatgtg ccagggccct gagaagggtcc ggggcatggc catcaaggac 1080
attaccagcg aggtggagag tgttttgaga cgggcgcgcg agggcggcgt ggccaatgcg 1140
gctgccaaga ccacggccag caaccacgcc tctgccacca cgccccaggg ttccctgttt 1200
acctcaagg ccaaaaggcc agggctgcgc ctccccgact ccaacattga ctaccccatg 1260
gccacgggtg atggcgccaa gacctggcc atccacgtga agggcctgac ggcagactcc 1320
atccgcatca cgtggaaggc cacgctcccc gcctcctctt tccggctcag ttggctgcgc 1380
ctgggccaca gcccagccgt gggctccatc acggagacct tggcgcaggg ggacaagaca 1440
gagtacctgc tgacagccct ggagcccaag tccacctaca tcatctgcat ggtcaccatg 1500
gagaccagca atgcctacgt agctgatgag acaccctgtg gtgccaaggc agagacagcc 1560
gacagctatg gccctaccac cacactcaac caggagcaga acgctggccc catggcgagc 1620
ctgcccctgg cgggcatcat cggcggggca gtggctctgg tcttcctctt cctggctcctg 1680
ggggccatct gctggtacgt gcaccagggt ggcgagctgc tgacccgga gagggcctac 1740
aaccggggca gcaggaaaaa ggatgactat atggagtcag ggaccaagaa ggataactcc 1800
atcctggaag tccgcggccc tgggctgcag atgctgcca tcaaccgta ccgcgcaaaa 1860
gaagagtacg tggtcacac tatcttcccc tccaacggca gcagcctctg caaggccaca 1920
cacaccattg gctacggcac cacgcggggc taccgggacg gcggcatccc cgacatagac 1980
tactcctaca ca                                     1992

```

<210> 68

<211> 664

<212> PRT

<213> Homo sapiens

<400> 68

```

Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
  1                      5                      10                      15

Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
      20                      25                      30

Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
      35                      40                      45

Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
      50                      55                      60

Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro
      65                      70                      75                      80

Asp Asp Ala Thr Thr Leu Tyr Leu Gln Asn Asn Gln Ile Asn Asn Ala
      85                      90                      95

Gly Ile Pro Gln Asp Leu Lys Thr Lys Val Asn Val Gln Val Ile Tyr
      100                     105                     110

Leu Tyr Glu Asn Asp Leu Asp Glu Phe Pro Ile Asn Leu Pro Arg Ser
      115                     120                     125

Leu Arg Glu Leu His Leu Gln Asp Asn Asn Val Arg Thr Ile Ala Arg
      130                     135                     140

Asp Ser Leu Ala Arg Ile Pro Leu Leu Glu Lys Leu His Leu Asp Asp
      145                     150                     155                     160

Asn Ser Val Ser Thr Val Ser Ile Glu Glu Asp Ala Phe Ala Asp Ser
      165                     170                     175

```

Lys Gln Leu Lys Leu Leu Phe Leu Ser Arg Asn His Leu Ser Ser Ile
 180 185 190
 Pro Ser Gly Leu Pro His Thr Leu Glu Glu Leu Arg Leu Asp Asp Asn
 195 200 205
 Arg Ile Ser Thr Ile Pro Leu His Ala Phe Lys Gly Leu Asn Ser Leu
 210 215 220
 Arg Arg Leu Val Leu Asp Gly Asn Leu Leu Ala Asn Gln Arg Ile Ala
 225 230 235 240
 Asp Asp Thr Phe Ser Arg Leu Gln Asn Leu Thr Glu Leu Ser Leu Val
 245 250 255
 Arg Asn Ser Leu Ala Ala Pro Pro Leu Tyr Leu Gln Asp Asn Ala Ile
 260 265 270
 Ser His Ile Pro Tyr Asn Thr Leu Ala Lys Met Arg Glu Leu Glu Arg
 275 280 285
 Leu Asp Leu Ser Asn Asn Asn Leu Thr Thr Leu Pro Arg Gly Leu Phe
 290 295 300
 Asp Asp Leu Gly Asn Leu Ala Gln Leu Leu Leu Arg Asn Asn Pro Trp
 305 310 315 320
 Phe Cys Gly Cys Asn Leu Met Trp Leu Arg Asp Trp Val Lys Ala Arg
 325 330 335
 Ala Ala Val Val Asn Val Arg Gly Leu Met Cys Gln Gly Pro Glu Lys
 340 345 350
 Val Arg Gly Met Ala Ile Lys Asp Ile Thr Ser Glu Val Glu Ser Val
 355 360 365
 Leu Arg Arg Ala Pro Gln Gly Gly Val Ala Asn Ala Ala Ala Lys Thr
 370 375 380
 Thr Ala Ser Asn His Ala Ser Ala Thr Thr Pro Gln Gly Ser Leu Phe
 385 390 395 400
 Thr Leu Lys Ala Lys Arg Pro Gly Leu Arg Leu Pro Asp Ser Asn Ile
 405 410 415
 Asp Tyr Pro Met Ala Thr Gly Asp Gly Ala Lys Thr Leu Ala Ile His
 420 425 430
 Val Lys Ala Leu Thr Ala Asp Ser Ile Arg Ile Thr Trp Lys Ala Thr
 435 440 445
 Leu Pro Ala Ser Ser Phe Arg Leu Ser Trp Leu Arg Leu Gly His Ser
 450 455 460
 Pro Ala Val Gly Ser Ile Thr Glu Thr Leu Val Gln Gly Asp Lys Thr
 465 470 475 480

gcccgctctca aaacactctc catct

25

<210> 71

<211> 54

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 71

Asn Pro Phe Asn Cys Asp Cys Glu Leu Arg Trp Leu Leu Arg Trp Leu
1 5 10 15

Arg Glu Thr Asn Pro Arg Arg Leu Glu Asp Gln Glu Asp Leu Arg Cys
20 25 30

Ala Ser Pro Glu Ser Leu Arg Gly Gln Pro Leu Leu Glu Leu Leu Pro
35 40 45

Ser Asp Phe Ser Cys Pro
50

<210> 72

<211> 84

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 72

Pro Ser Ala Pro Thr Asn Leu Thr Val Thr Asp Val Thr Ser Thr Ser
1 5 10 15

Leu Thr Leu Ser Trp Ser Pro Pro Thr Gly Asn Gly Pro Ile Thr Gly
20 25 30

Tyr Glu Val Thr Tyr Arg Gln Pro Lys Asn Gly Gly Glu Trp Asn Glu
35 40 45

Leu Thr Val Pro Gly Thr Thr Thr Ser Tyr Thr Leu Thr Gly Leu Lys
50 55 60

Pro Gly Thr Glu Tyr Glu Val Arg Val Gln Ala Val Asn Gly Gly Gly
65 70 75 80

Gly Pro Glu Ser

<210> 73

<211> 23

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 73
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15
Gly Leu Phe Ser Asn Leu Pro
20

<210> 74
<211> 949
<212> DNA
<213> Homo sapiens

<400> 74
atggtggtgg cacacccac cgccactgcc accaccacgc ccactgccac tgtcacggcc 60
accgttgtga tgaccacggc caccatggac ctgcgggact ggctgttcct ctgctacggg 120
ctcatcgctt tcctgacgga ggtcatcgac agcaccacct gccctcggt gtgccgctgc 180
gacaacggct tcattctactg caacgaccgg ggactcacat ccatccccgc agatatccct 240
gatgacgcca ccaccctcta tctgcagaac aaccagatca acaacgctgg catccccag 300
gacctcaaga ccaaggtcaa cgtgcaggtc atctacctat acgagaatga cctggatgag 360
ttccccatca acctgccccg ctccctccgg gagctgcacc tgcaggacaa caatgtgcgc 420
accattgccg gggactcgct ggcccgcac ccgctgctgg agaagctgca cctggatgac 480
aactccgtgt ccaccgtcag cattgaggag gacgccttcg ccgacagcaa acagctcaag 540
ctgctcttcc tgagccggaa ccacctgagc agcatccctt cggggctgcc gcacacgctg 600
gaggagctgc ggctggatga caaccgcac tccaccatcc cgctgcatgc cttcaagggc 660
ctcaacagcc tgcggcgctt ggtgctggac ggtaacctgc tggccaacca gcgcatcgcc 720
gacgacacct tcagccgctt acagaacctc acagagctct cgctgggtgcg caattcgctg 780
gccgcgccac cctcaacct gccagcgcc cacctgcaga aactctacct gcaggacaat 840
gccatcagcc acatccccta caacacgctg gccaaagtgc gtgagctgga gcggctggac 900
ctgtccaaca acaacctgac cacgctgccc cgcggcctgt tcgacgacc 949

<210> 75
<211> 674
<212> PRT
<213> Homo sapiens

<400> 75
Met Val Val Ala His Pro Thr Ala Thr Ala Thr Thr Thr Pro Thr Ala
1 5 10 15
Thr Val Thr Ala Thr Val Val Met Thr Thr Ala Thr Met Asp Leu Arg
20 25 30
Asp Trp Leu Phe Leu Cys Tyr Gly Leu Ile Ala Phe Leu Thr Glu Val
35 40 45
Ile Asp Ser Thr Thr Cys Pro Ser Val Cys Arg Cys Asp Asn Gly Phe
50 55 60
Ile Tyr Cys Asn Asp Arg Gly Leu Thr Ser Ile Pro Ala Asp Ile Pro

65					70						75				80
Asp	Asp	Ala	Thr	Thr	Leu	Tyr	Leu	Gln	Asn	Asn	Gln	Ile	Asn	Asn	Ala
				85					90					95	
Gly	Ile	Pro	Gln	Asp	Leu	Lys	Thr	Lys	Val	Asn	Val	Gln	Val	Ile	Tyr
			100					105					110		
Leu	Tyr	Glu	Asn	Asp	Leu	Asp	Glu	Phe	Pro	Ile	Asn	Leu	Pro	Arg	Ser
		115					120					125			
Leu	Arg	Glu	Leu	His	Leu	Gln	Asp	Asn	Asn	Val	Arg	Thr	Ile	Ala	Arg
	130					135					140				
Asp	Ser	Leu	Ala	Arg	Ile	Pro	Leu	Leu	Glu	Lys	Leu	His	Leu	Asp	Asp
145					150					155					160
Asn	Ser	Val	Ser	Thr	Val	Ser	Ile	Glu	Glu	Asp	Ala	Phe	Ala	Asp	Ser
				165					170					175	
Lys	Gln	Leu	Lys	Leu	Leu	Phe	Leu	Ser	Arg	Asn	His	Leu	Ser	Ser	Ile
		180						185					190		
Pro	Ser	Gly	Leu	Pro	His	Thr	Leu	Glu	Glu	Leu	Arg	Leu	Asp	Asp	Asn
		195					200					205			
Arg	Ile	Ser	Thr	Ile	Pro	Leu	His	Ala	Phe	Lys	Gly	Leu	Asn	Ser	Leu
	210					215					220				
Arg	Arg	Leu	Val	Leu	Asp	Gly	Asn	Leu	Leu	Ala	Asn	Gln	Arg	Ile	Ala
225					230					235					240
Asp	Asp	Thr	Phe	Ser	Arg	Leu	Gln	Asn	Leu	Thr	Glu	Leu	Ser	Leu	Val
				245					250					255	
Arg	Asn	Ser	Leu	Ala	Ala	Pro	Pro	Leu	Asn	Leu	Pro	Ser	Ala	His	Leu
			260					265					270		
Gln	Lys	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	Ile	Ser	His	Ile	Pro	Tyr	Asn
	275						280					285			
Thr	Leu	Ala	Lys	Met	Arg	Glu	Leu	Glu	Arg	Leu	Asp	Leu	Ser	Asn	Asn
	290					295					300				
Asn	Leu	Thr	Thr	Leu	Pro	Arg	Gly	Leu	Phe	Asp	Asp	Leu	Gly	Asn	Leu
305					310					315					320
Ala	Gln	Leu	Leu	Leu	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Gly	Cys	Asn	Leu
				325					330					335	
Met	Trp	Leu	Arg	Asp	Trp	Val	Lys	Ala	Arg	Ala	Ala	Val	Val	Asn	Val
		340						345						350	
Arg	Gly	Leu	Met	Cys	Gln	Gly	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile
		355					360					365			
Lys	Asp	Ile	Thr	Ser	Glu	Met	Asp	Glu	Cys	Phe	Glu	Thr	Gly	Pro	Gln

370					375					380					
Gly	Gly	Val	Ala	Asn	Ala	Ala	Ala	Lys	Thr	Thr	Ala	Ser	Asn	His	Ala
385					390					395					400
Ser	Ala	Thr	Thr	Pro	Gln	Gly	Ser	Leu	Phe	Thr	Leu	Lys	Ala	Lys	Arg
				405					410					415	
Pro	Gly	Leu	Arg	Leu	Pro	Asp	Ser	Asn	Ile	Asp	Tyr	Pro	Met	Ala	Thr
			420					425					430		
Gly	Asp	Gly	Ala	Lys	Thr	Leu	Ala	Ile	His	Val	Lys	Ala	Leu	Thr	Ala
			435				440					445			
Asp	Ser	Ile	Arg	Ile	Thr	Trp	Lys	Ala	Thr	Leu	Pro	Ala	Ser	Ser	Phe
	450					455					460				
Arg	Leu	Ser	Trp	Leu	Arg	Leu	Gly	His	Ser	Pro	Ala	Val	Gly	Ser	Ile
465						470					475				480
Thr	Glu	Thr	Leu	Val	Gln	Gly	Asp	Lys	Thr	Glu	Tyr	Leu	Leu	Thr	Ala
				485					490					495	
Leu	Glu	Pro	Lys	Ser	Thr	Tyr	Ile	Ile	Cys	Met	Val	Thr	Met	Glu	Thr
			500					505					510		
Ser	Asn	Ala	Tyr	Val	Ala	Asp	Glu	Thr	Pro	Val	Cys	Ala	Lys	Ala	Glu
			515				520					525			
Thr	Ala	Asp	Ser	Tyr	Gly	Pro	Thr	Thr	Thr	Leu	Asn	Gln	Glu	Gln	Asn
	530					535					540				
Ala	Gly	Pro	Met	Ala	Ser	Leu	Pro	Leu	Ala	Gly	Ile	Ile	Gly	Gly	Ala
545						550					555				560
Val	Ala	Leu	Val	Phe	Leu	Phe	Leu	Val	Leu	Gly	Ala	Ile	Cys	Trp	Tyr
				565					570					575	
Val	His	Gln	Ala	Gly	Glu	Leu	Leu	Thr	Arg	Glu	Arg	Ala	Tyr	Asn	Arg
			580					585					590		
Gly	Ser	Arg	Glu	Lys	Asp	Asp	Tyr	Met	Glu	Ser	Gly	Thr	Lys	Lys	Asp
			595				600					605			
Asn	Ser	Ile	Leu	Glu	Ile	Arg	Gly	Pro	Gly	Leu	Gln	Met	Leu	Pro	Ile
	610					615					620				
Asn	Pro	Tyr	Arg	Ala	Lys	Glu	Glu	Tyr	Val	Val	His	Thr	Ile	Phe	Pro
625						630					635				640
Ser	Asn	Gly	Ser	Ser	Leu	Cys	Lys	Ala	Thr	His	Thr	Ile	Gly	Tyr	Gly
				645					650					655	
Thr	Thr	Arg	Gly	Tyr	Arg	Asp	Gly	Gly	Ile	Pro	Asp	Ile	Asp	Tyr	Ser
			660					665					670		
Tyr	Thr														

<210> 76
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 76
Ala Cys Pro Arg Glu Cys Thr Cys Ser Pro Phe Gly Leu Val Val Asp
1 5 10 15
Cys Ser Gly Arg Gly Leu Thr Leu Glu Val Pro Arg Asp Leu Pro
20 25 30

<210> 77
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 77
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15
Gly Leu Phe Ser Asn Leu Pro
20

<210> 78
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:consensus
sequence

<400> 78
Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15
Gly Leu Phe Ser Asn Leu Pro
20

<210> 79
<211> 23
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 79

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 80

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 80

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 81

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 81

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 82

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 82

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 83

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 83

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20

<210> 84

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<400> 84

Asn Leu Glu Glu Leu Asp Leu Ser Asn Asn Leu Thr Ser Leu Pro Pro
1 5 10 15

Gly Leu Phe Ser Asn Leu Pro
20